The Complete Placement Guide for IT Companies (Non Technical)

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Preface

Placements are always a headache for most of the Engineering students. Usually, a majority of the students are always in a state of confusion for deciding which book to refer, where to start from and which company to target. When a student gets to know about the arrival of a company, he would then start preparing for the test. Namely, a student will start preparing for the technical interview, aptitude test, Group Discussion, HR Interview and all other necessary tests. Now the biggest problem is the availability of resources in study material for preparing for these tests.

We have thus identified the major areas where a student should prepare himself for an aptitude test or a technical interview so as to get placed into an IT company. The technical fields are viz: C, C++, Java, Oracle, JDBC, Operating Systems and Networking. Similarly, amongst the non-technical fields a student needs to mentally prepare himself for an aptitude test and a HR interview. All the basic study material required to prepare concerning the above related fields are deployed in this book

The book makes available all available resources over the internet to the students in a simple and compiled format.

Regards

Team : IT Engg Portal

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Aptitude Interview Question

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Aptitude Interview Questions

You are given two candles of equal size, which can burn 1 hour each. You have to measure 90 minutes with these candles. (There is no scale or clock). Also u r given a lighter.

Ans: 1. First light up the two ends of the 1st candle. When it will burn out light up one end of the second candle. (30+60=90)

You r given a thermometer. What can u do by this without measuring the temperature?

Ans: if u put thermometer into a tree it won't grow anymore, will just die off

You are a landscape designer and your boss asked u to design a landscape such that you should place 4 trees equidistance from each other.
(Distance from each tree to the other must be same)

Ans: Only 3 points can be equidistant from each other. But if u place points in the shape of a pyramid then its possible

You are given a cake; one of its corner is broken. How will u cut the rest into Two equal parts?

Ans: Slice the cake

How will you recognize the magnet & magnetic material & non-magnetic material?

Ans: Drag one piece of material over another. There is no attractive force in the middle portion of the magnet. OR
Get a piece of thread and tie up with the one bar and check for poles. If it iron bar then it moves freely and if it is magnetic bar then it fix in one direction according to poles.

If one tyre of a car suddenly gets stolen and after sometime u find the tyre without the screws how will u make ur journey complete?

Ans: Open 3 screws, 1 from each tyre and fix the tyre.

How can u measure a room height using a thermometer?

Ans: temp varies with height. but its dependent on various other factors like humidity, wind etc.

What is the height of room if after entering the room with a watch ur head strikes a hanging bulb?

Ans: Oscillate the hanging bulb. Calculate the time period for one complete oscillation by Simple Harmonic Motion (SHM) of the handing bulb. Put it in the formula T=2 * 3.14 * (L/G)^1/2
L will be the length of the hanging thread.
Add the L with ur height to get the height of the room.

How will you measure height of building when you are at the top of the building? And if you have stone with you.

Ans: Drop the stone and find the time taken for the stone to reach the ground. find height using the formula
s = a + gt (s = height, a= initial velocity=0, g=9.8m/s, t = time taken)

There are three people A, B, C. Liars are of same type and Truth speaking people are of same type. Find out who is speaking truth and who is speaking false from the following statements:
a) A says: B is a liar.
b) B says: A and C are of same type.

Ans: lets assume A is speaking truth. It means B is a liar then it means A and C are not of same type.

in a race u drove 1st lap with 40kmph and in the second lap at what speed u must drive so that ur average speed must be 80kmph.

Ans: its impossible! if u drove the first lap in 40 kmph, its impossible that the average speed of both the laps is 80kmph.
for eg. consider one lap distance = 80km.
time req. to cover 1 lap = 80km/40kmph = 2 hrs.

if the avg. speed is 80kmph, then the total time would have taken = 160kms/80kmph = 2 hrs.
same is the case with any other distance u consider. so the avg to be 80kmph is impossible

You have to draw 3 concentric circles with a line passing thru their center without lifting hand.

Ans: Start the line complete one circle move inside circles along the line and then draw second circle. Like wise rest.

A rectangular paper is there. At a corner a rectangular size paper is taken from it. Now you have to cut the remaining paper into two equal halves.

Ans: try it on the paper. You must fold the part that has complete paper and select Half of it and then fold the part that cut and selects half of it and then cut along the folding.

Value of (x-a)(x-b). . . . (x-z)

Ans: 0 as there's X-X term

There are 9 coins. 8 are of 1 gm and 1 is of 2 grams. How will you find out the heavier coin in minimum number of weighing and how many weighing it will need?

Ans: 2 weighing (Divide the number of coins into 3 parts at each weighing)

If a bear walks one mile south, turns left and walks one mile to the east and then turns left again and walks one mile north and arrives at its original position, what is the color of the bear.

ANS. The color of the bear is trivial. The possible solutions to it are interesting. In addition to the trivial north pole, there are additional circles near south pole. Think it out.

Given a rectangular (cuboidal for the puritans) cake with a rectangular piece removed (any size or orientation), how would you cut the remainder of the cake into two equal halves with one straight cut of a knife?

ANS. Join the centers of the original and the removed rectangle. It works for cuboids too! BTW, I have been getting many questions asking why a horizontal slice across the middle will not do. Please note the "any size or orientation" in the question! Don't get boxed in by the way you cut your birthday cake :) Think out of the box.

You have 5 jars of pills. Each pill weighs 10 gram, except for contaminated pills contained in one jar, where each pill weighs 9 gm. Given a scale, how could you tell which jar had the contaminated pills in just one measurement?

ANS. 1. Mark the jars with numbers 1, 2, 3, 4, and 5.
2. Take 1 pill from jar 1, take 2 pills from jar 2, take 3 pills from jar 3, take 4 pills from jar 4 and take 5 pills from jar 5.
3. Put all of them on the scale at once and take the measurement.
4. Now, subtract the measurement from 150 (1*10 + 2*10 + 3*10 + 4*10 + 5*10)
5. The result will give you the jar number which has contaminated pill.

In a tournament there are 20 flag poles equidistant from each other. each runner starts from the first flag. In 24 sec the runner reaches the 12th flag. How much it will take him to complete the 20th flag.

ans. (24/11)*19

At 6'o clock clock ticks 6 times. The time between first and last ticks was 30sec. How much time it takes at 12'o clock.

Ans. 66 sec. 2 marks.

Three friends divided some bullets equally. After all of them shot 4 bullets the total no. of remaining bullets is equal to that of one has after division. Find the original number divided.

Ans. x x x
x-4 x-4 x-4
3x-12 = x
x= 6
ans is 18 2 marks

A ship went on a voyage after 180 miles a plane started with 10 times speed that of the ship. Find the distance when they meet from starting point.

Ans. 180 + (x/10) = x
x = 20
ans is 180+20=200miles. 2 marks

There N stations on a railroad. After adding x stations 46 additional tickets have to be printed. Find N and X.

Ans. let N(N-1) = t;
(N+x)(N+x-1) = t+46;
trail and error method x=2 and N=11 4 marks

A beggar collects cigarette stubs and makes one full cigarette with every 7 stubs. Once he gets 49 stubs . How many cigarettes can he smoke totally.

Ans. 8

1000000000 can be written as a product of two factors neither of them containing zeros

Ans 2 power 9 x 5 power 9

Light glows for every 13 seconds . How many times did it between 1:57:58 and 3:20:47 am

Ans : 383 + 1 = 384

A person spending out 1/3 for cloths , 1/5 of the remaining for food and 1/4 of the remaining for travelled is left with Rs 100/- . How he had in the beginning ?

Ans RS 250/

If 2x-y=4 then 6x-3y=?

(a)15
(b)12
(c)18
(d)10

Ans. (b)

If x=y=2z and xyz=256 then what is the value of x?

(a)12
(b)8
(c)16
(d)6

Ans. (b)

(1/10)18 - (1/10)20 = ?

(a) 99/1020
(b) 99/10
(c) 0.9
(d) none of these

Ans. (a)

Pipe A can fill in 20 minutes and Pipe B in 30 mins and Pipe C can empty the same in 40 mins.If all of them work together, find the time taken to fill the tank

(a) 17 1/7 mins
(b) 20 mins
(c) 8 mins
(d) none of these

Ans. (a)

Thirty men take 20 days to complete a job working 9 hours a day. How many hour a day should 40 men work to complete the job?
(a) 8 hrs
(b) 7 1/2 hrs
(c) 7 hrs
(d) 9 hrs

Ans. (b)

Find the smallest number in a GP whose sum is 38 and product 1728

(a) 12
(b) 20
(c) 8
(d) none of these

Ans. (c)

A boat travels 20 kms upstream in 6 hrs and 18 kms downstream in 4 hrs. Find the speed of the boat in still water and the speed of the water current?

(a) 1/2 kmph
(b) 7/12 kmph
(c) 5 kmph
(d) none of these

Ans. (b)

A goat is tied to one corner of a square plot of side 12m by a rope 7m long. Find the area it can graze?
(a) 38.5 sq.m
(b) 155 sq.m
(c) 144 sq.m
(d) 19.25 sq.m

Ans. (a)

Mr. Shah decided to walk down the escalator of a tube station. He found that if he walks down 26 steps, he requires 30 seconds to reach the bottom. However, if he steps down 34 stairs he would only require 18 seconds to get to the bottom. If the time is measured from the moment the top step begins to descend to the time he steps off the last step at the bottom, find out the height of the stair way in steps?
Ans.46 steps.

The average age of 10 members of a committee is the same as it was 4 years ago, because an old member has been replaced by a young member. Find how much younger is the new member ?
Ans.40 years.

ABCE is an isosceles trapezoid and ACDE is a rectangle. AB = 10 and EC = 20. What is the length of AE?
Ans. AE = 10.

In the given figure, PA and PB are tangents to the circle at A and B respectively and the chord BC is parallel to tangent PA. If AC = 6 cm, and length of the

tangent AP is 9 cm, then what is the length of the chord BC?
Ans. BC = 4 cm.

Three cards are drawn at random from an ordinary pack of cards. Find the probability that they will consist of a king, a queen and an ace.
Ans. 64/2210.

A number of cats got together and decided to kill between them 999919 mice. Every cat killed an equal number of mice. Each cat killed more mice than there were cats. How many cats do you think there were ?
Ans. 991.

If Log2 x - 5 Log x + 6 = 0, then what would the value / values of x be?
Ans. x = e2 or e3.

The square of a two digit number is divided by half the number. After 36 is added to the quotient, this sum is then divided by 2. The digits of the resulting number are the same as those in the original number, but they are in reverse order. The ten's place of the original number is equal to twice the difference between its digits. What is the number?
Ans. 46

Can you tender a one rupee note in such a manner that there shall be total 50 coins but none of them would be 2 paise coins.?
Ans. 45 one paisa coins, 2 five paise coins, 2 ten paise coins, and 1 twenty-five paise coins.

A monkey starts climbing up a tree 20ft. tall. Each hour, it hops 3ft. and slips back 2ft. How much time would it take the monkey to reach the top?
Ans.18 hours.

What is the missing number in this series?
8 2 14 6 11 ? 14 6 18 12
Ans. 9

A certain type of mixture is prepared by mixing brand A at Rs.9 a kg. with brand B at Rs.4 a kg. If the mixture is worth Rs.7 a kg., how many kgs. of brand A are needed to make 40kgs. of the mixture?
Ans. Brand A needed is 24kgs.

A wizard named Nepo says "I am only three times my son's age. My father is 40 years more than twice my age. Together the three of us are a mere 1240 years old." How old is Nepo?

Ans. 360 years old.

One dog tells the other that there are two dogs in front of me. The other one also shouts that he too had two behind him. How many are they?

Ans. Three.

A man ate 100 bananas in five days, each day eating 6 more than the previous day. How many bananas did he eat on the first day?

Ans. Eight.

If it takes five minutes to boil one egg, how long will it take to boil four eggs?

Ans. Five minutes.

The minute hand of a clock overtakes the hour hand at intervals of 64 minutes of correct time. How much a day does the clock gain or lose?

Ans. 32 8/11 minutes.

Solve for x and y: 1/x - 1/y = 1/3, 1/x2 + 1/y2 = 5/9.
Ans. x = 3/2 or -3 and y = 3 or -3/2.

Daal is now being sold at Rs. 20 a kg. During last month its rate was Rs. 16 per kg. By how much percent should a family reduce its consumption so as to keep the expenditure fixed?

Ans. 20 %.

Find the least value of 3x + 4y if x2y3 = 6.

Ans. 10.

Can you find out what day of the week was January 12, 1979?

Ans. Friday.

A garrison of 3300 men has provisions for 32 days, when given at a rate of 850 grams per head. At the end of 7 days a reinforcement arrives and it was found that now the provisions will last 8 days less, when given at the rate of 825 grams per head. How, many more men can it feed?
Ans. 1700 men.

From 5 different green balls, four different blue balls and three different red balls, how many combinations of balls can be chosen taking at least one green and one blue ball?

Ans. 3720.

Three pipes, A, B, & C are attached to a tank. A & B can fill it in 20 & 30 minutes respectively while C can empty it in 15 minutes. If A, B & C are kept open successively for 1 minute each, how soon will the tank be filled?

Ans. 167 minutes.

A person walking 5/6 of his usual rate is 40 minutes late. What is his usual time?

Ans. 3 hours 20 minutes.

For a motorist there are three ways going from City A to City C. By way of bridge the distance is 20 miles and toll is $0.75. A tunnel between the two cities is a distance of 10 miles and toll is $1.00 for the vehicle and driver and $0.10 for each passenger. A two-lane highway without toll goes east for 30 miles to city B and then 20 miles in a northwest direction to City C.

1. Which is the shortest route from B to C
(a) Directly on toll free highway to City C
(b) The bridge
(c) The Tunnel
(d) The bridge or the tunnel
(e) The bridge only if traffic is heavy on the toll free highway

Ans. (a)

2. The most economical way of going from City A to City B, in terms of toll and distance is to use the
(a) tunnel
(b) bridge
(c) bridge or tunnel
(d) toll free highway
(e) bridge and highway

Ans. (a)

3. Jim usually drives alone from City C to City A every working day. His firm deducts a percentage of employee pay for lateness. Which factor would most

influence his choice of the bridge or the tunnel ?
(a) Whether his wife goes with him
(b) scenic beauty on the route
(c) Traffic conditions on the road, bridge and tunnel
(d) saving $0.25 in tolls
(e) price of gasoline consumed in covering additional 10 miles on the bridge

Ans. (a)

4. In choosing between the use of the bridge and the tunnel the chief factor(s) would be:
I. Traffic and road conditions
II. Number of passengers in the car
III. Location of one's homes in the center or outskirts of one of the cities
IV. Desire to save $0.25

(a) I only
(b) II only
(c) II and III only
(d) III and IV only
(e) I and II only

Ans. (a)

The letters A, B, C, D, E, F and G, not necessarily in that order, stand for seven consecutive integers from 1 to 10
D is 3 less than A
B is the middle term
F is as much less than B as C is greater than D
G is greater than F

1. The fifth integer is
(a) A
(b) C
(c) D
(d) E
(e) F

Ans. (a)

2. A is as much greater than F as which integer is less than G
(a) A
(b) B

(c) C
(d) D
(e) E

Ans. (a)

3. If A = 7, the sum of E and G is
(a) 8
(b) 10
(c) 12
(d) 14
(e) 16

Ans. (a)

4. A - F = ?
(a) 1
(b) 2
(c) 3
(d) 4
(e) Cannot be determined

Ans. (a)

5. An integer T is as much greater than C as C isgreater than E. T can be written as A + E. What is D?
(a) 2
(b) 3
(c) 4
(d) 5
(e) Cannot be determined

Ans. (a)

6. The greatest possible value of C is how much greater than the smallest possible value of D?
(a) 2
(b) 3
(c) 4
(d) 5
(e) 6

Ans. (a)

In country X, democratic, conservative and justice parties have fought three civil wars in twenty years. TO restore stability an agreement is reached to rotate the top offices President, Prime Minister and Army Chief among the parties so that

each party controls one and only one office at all times. The three top office holders must each have two deputies, one from each of the other parties. Each deputy must choose a staff composed of equally members of his or her chiefs party and member of the third party.

When Justice party holds one of the top offices, which of the following cannot be true
(a) Some of the staff members within that office are justice party members
(b) Some of the staff members within that office are democratic party members
(c) Two of the deputies within the other offices are justice party members
(d) Two of the deputies within the other offices are conservative party members
(e) Some of the staff members within the other offices are justice party members.

Ans. (a)

When the democratic party holds presidency, the staff of the prime minister's deputies are composed
I. One-fourth of democratic party members
II. One-half of justice party members and one-fourth of conservative party members
III. One-half of conservative party members and one-fourth of justice party members.

(a) I only
(b) I and II only
(c) II or III but not both
(d) I and II or I and III
(e) None of these

Ans. (a)

Which of the following is allowable under the rules as stated:
(a) More than half of the staff within a given office belonging to a single party
(b) Half of the staff within a given office belonging to a single party

(c) Any person having a member of the same party as his or her
immediate superior
(d) Half the total number of staff members in all three offices
belonging to a single party
(e) Half the staff members in a given office belonging to parties
different from the party of the top office holder in that office.

Ans. (a)

The office of the Army Chief passes from Conservative to Justice party. Which of the following must be fired.
(a) The democratic deputy and all staff members
belonging to Justice party
(b) Justice party deputy and all his or hers staff members
(c) Justice party deputy and half of his Conservative staff members in
the chief of staff office
(d) The Conservative deputy and all of his or her staff members
belonging to Conservative party
(e) No deputies and all staff members belonging to conservative parties.

Ans. (a)

In recommendations to the board of trustees a tuition increase of $500 per year, the president of the university said "There were no student demonstrations over the previous increases of $300 last year and $200 the year before". If the president's statement is accurate then which of the following can be validly inferred from the information given:
I. Most students in previous years felt that the increases were justified because of increased operating costs.
II. Student apathy was responsible for the failure of students to protest the previous tuition increases.
III. Students are not likely to demonstrate over new tuition increases.

(a) I only
(b) II only
(c) I or II but not both
(d) I, II and III
(e) None

Ans. (a)

The office staff of XYZ corporation presently consists of three bookeepers--A, B, C and 5 secretaries D, E, F, G, H. The management is planning to open a new office in another city using 2 bookeepers and 3 secretaries of the present staff . To do so they plan to seperate certain individuals who don't function well together. The following guidelines were established to set up the new office

I. Bookeepers A and C are constantly finding fault with one another and should not be sent together to the new office as a team

II. C and E function well alone but not as a team , they should be seperated

III. D and G have not been on speaking terms and shouldn't go together

IV Since D and F have been competing for promotion they shouldn't be a team

If A is to be moved as one of the bookeepers, which of the following cannot be a possible working unit.

A.ABDEH
B.ABDGH
C.ABEFH
D.ABEGH

Ans.B

If C and F are moved to the new office, how many combinations are possible

A.1
B.2
C.3
D.4

Ans.A

If C is sent to the new office,which member of the staff cannot go with C

A.B
B.D
C.F
D.G

Ans.B

Under the guidelines developed, which of the following must go to the new office
A.B
B.D
C.E
D.G

Ans.A

If D goes to the new office, which of the following is/are true
I.C cannot go
II.A cannot go
III.H must also go

A.I only
B.II only
C.I and II only
D.I and III only

Ans.D

After months of talent searching for an administrative assistant to the president of the college the field of applicants has been narrowed down to 5--A, B, C, D, E .It was announced that the finalist would be chosen after a series of all-day group personal interviews were held. The examining committee agreed upon the following procedure
I. The interviews will be held once a week
II. 3 candidates will appear at any all-day interview session
III. Each candidate will appear at least once
IV. If it becomes necessary to call applicants for additional interviews, no more 1 such applicant should be asked to appear the next week
V. Because of a detail in the written applications, it was agreed that whenever candidate B appears, A should also be present.
VI. Because of travel difficulties it was agreed that C will appear for only 1 interview.
>

At the first interview the following candidates appear A,B,D. Which of the following combinations can be called for the interview to be held next week.
A.BCD
B.CDE
C.ABE

D.ABC

Ans.B

Which of the following is a possible sequence of combinations for interviews in 2 successive weeks
A.ABC;BDE
B.ABD;ABE
C.ADE;ABC
D.BDE;ACD

Ans.C

If A ,B and D appear for the interview and D is called for additional interview the following week, which 2 candidates may be asked to appear with D?
I. A
II B
III.C
IV.E
A.I and II
B.I and III only
C.II and III only
D.III and IV only

Ans.D

Which of the following correctly state(s) the procedure followed by the search committee
I.After the second interview all applicants have
appeared at least once
II.The committee sees each applicant a second time
III.If a third session,it is possible for all
applicants to appear at
least twice

A.I only
B.II only
C.III only
D.Both I and II

Ans.A

A certain city is served by subway lines A,B and C and numbers 1 2 and 3 When it snows , morning service on B is delayed When it rains or snows , service on A, 2 and 3 are delayed both in the morning and afternoon When temp. falls below 30 degrees Fahrenheit afternoon service is cancelled in either the A line or the 3 line,

but not both. When the temperature rises over 90 degrees Fahrenheit, the afternoon service is cancelled in either the line C or the 3 line but not both. When the service on the A line is delayed or cancelled, service on the C line which connects the A line, is delayed. When service on the 3 line is cancelled, service on the B line which connects the 3 line is delayed.

On Jan 10th, with the temperature at 15 degree Fahrenheit, it snows all day. On how many lines will service be affected, including both morning and afternoon.
(A) 2
(B) 3
(C) 4
(D) 5
Ans. D

On Aug 15th with the temperature at 97 degrees Fahrenheit it begins to rain at 1 PM. What is the minimum number of lines on which service will be affected?
(A) 2
(B) 3
(C) 4
(D) 5
Ans. C

On which of the following occasions would service be on the greatest number of lines disrupted.
(A) A snowy afternoon with the temperature at 45 degree farenheit
(B) A snowy morning with the temperature at 45 degree farenheit
(C) A rainy afternoon with the temperature at 45 degree farenheit
(D) A rainy afternoon with the temperature at 95 degree farenheit
Ans. B

In a certain society, there are two marriage groups, red and brown. No marriage is permitted within a group. On marriage, males become part of their wives groups; women remain in their own group. Children belong to the same group as their parents. Widowers and divorced males revert to the group of their birth. Marriage to more than one person at the same time and marriage to a direct descendant are forbidden

Q1. A brown female could have had I. A grandfather born Red
II. A grandmother born Red
III Two grandfathers born Brown
(A) I only
(B) III only
(C) I, II and III

(D) I and II only

Ans. D

Q2. A male born into the brown group may have
(A) An uncle in either group
(B) A brown daughter
(C) A brown son
(D) A son-in-law born into red group
Ans. A

Q3. Which of the following is not permitted under the rules as stated.
(A) A brown male marrying his father's sister
(B) A red female marrying her mother's brother
(C) A widower marrying his wife's sister
(D) A widow marrying her divorced daughter's ex-husband

Ans. B

Q4. If widowers and divorced males retained their group they had upon marrying which of the following would be permissible (Assume that no previous marriage occurred)
(A) A woman marrying her dead sister's husband
(B) A woman marrying her divorced daughter's ex-husband
(C) A widower marrying his brother's daughter
(D) A woman marrying her mother's brother who is a widower.

Ans. D

There are six steps that lead from the first to the second floor. No two people can be on the same step Mr. A is two steps below Mr. C Mr. B is a step next to Mr. D Only one step is vacant (No one standing on that step)Denote the first step by step 1 and second step by step 2 etc.
1. If Mr. A is on the first step, Which of the following is true?
(a) Mr. B is on the second step
(b) Mr. C is on the fourth step.
(c) A person Mr. E, could be on the third step
(d) Mr. D is on higher step than Mr. C.

Ans: (d)

2. If Mr. E was on the third step & Mr. B was on a higher step than Mr. E which step must be vacant
(a) step 1

(b) step 2
(c) step 4
(d) step 5
(e) step 6

Ans: (a)

3. If Mr. B was on step 1, which step could A be on?
(a) 2&e only
(b) 3&5 only
(c) 3&4 only
(d) 4&5 only
(e) 2&4 only

Ans: (c)

4. If there were two steps between the step that A was standing and the step that B was standing on, and A was on a higher step than D , A must be on step
(a) 2
(b) 3
(c) 4
(d) 5
(e) 6

Ans: (c)

5. Which of the following is false
i. B&D can be both on odd-numbered steps in one configuration
ii. In a particular configuration A and C must either both an odd
numbered steps or both an even-numbered steps
iii. A person E can be on a step next to the vacant step.
(a) i only
(b) ii only
(c) iii only
(d) both i and iii
Ans: (c)

Six swimmers A, B, C, D, E, F compete in a race. The outcome is as follows.
i. B does not win.
ii. Only two swimmers separate E & D
iii. A is behind D & E
iv. B is ahead of E , with one swimmer intervening
v. F is a head of D

1. Who stood fifth in the race ?
(a) A
(b) B
(c) C
(d) D
(e) E

Ans: (e)

2. How many swimmers separate A and F ?
(a) 1
(b) 2
(c) 3
(d) 4
(e) cannot be determined

Ans: (d)

3. The swimmer between C & E is
(a) none
(b) F
(c) D
(d) B
(e) A

Ans: (a)

4. If the end of the race, swimmer D is disqualified by the Judges then swimmer B finishes in which place
(a) 1
(b) 2
(c) 3
(d) 4
(e) 5

Ans: (b)

Five houses lettered A,B,C,D, & E are built in a row next to each other. The houses are lined up in the order A,B,C,D, & E. Each of the five houses has a colored chimney. The roof and chimney of each house must be painted as follows.
i. The roof must be painted either green, red ,or yellow.
ii. The chimney must be painted either white, black,
or red.
iii. No house may have the same color chimney as the
color of roof.
iv. No house may use any of the same colors that the

every next house
uses.
v. House E has a green roof.
vi. House B has a red roof and a black chimney

1. Which of the following is true ?
(a) At least two houses have black chimney.
(b) At least two houses have red roofs.
(c) At least two houses have white chimneys
(d) At least two houses have green roofs
(e) At least two houses have yellow roofs

Ans: (c)

2. Which must be false ?
(a) House A has a yellow roof
(b) House A & C have different color chimney
(c) House D has a black chimney
(d) House E has a white chimney
(e) House B&D have the same color roof.

Ans: (b)

3. If house C has a yellow roof. Which must be true.
(a) House E has a white chimney
(b) House E has a black chimney
(c) House E has a red chimney
(d) House D has a red chimney
(e) House C has a black chimney

Ans: (a)

4. Which possible combinations of roof & chimney can house
I. A red roof 7 a black chimney
II. A yellow roof & a red chimney
III. A yellow roof & a black chimney

(a) I only
(b) II only
(c) III only
(d) I & II only
(e) I&II&III

Ans: (e)

Find x+2y
(i). x+y=10

(ii). 2x+4y=20

Ans: (b)

Is angle BAC is a right angle
(i) AB=2BC
(2) BC=1.5AC

Ans: (e)

Is x greater than y
(i) x=2k
(ii) k=2y

Ans: (e)

If 2x-y=4 then 6x-3y=?

(a)15
(b)12
(c)18
(d)10

Ans. (b)

If x=y=2z and xyz=256 then what is the value of x?

(a)12
(b)8
(c)16
(d)6

Ans. (b)

Pipe A can fill in 20 minutes and Pipe B in 30 mins and Pipe C can empty the same in 40 mins. If all of them work together, find the time taken to fill the tank

(a) 17 1/7 mins
(b) 20 mins
(c) 8 mins
(d) none of these

Ans. (a)

Thirty men take 20 days to complete a job working 9 hours a day. How many hour a day should 40 men work to complete the job?

(a) 8 hrs
(b) 7 1/2 hrs
(c) 7 hrs
(d) 9 hrs

Ans. (b)

Find the smallest number in a GP whose sum is 38 and product 1728

(a) 12
(b) 20
(c) 8
(d) none of these

Ans. (c)

A boat travels 20 kms upstream in 6 hrs and 18 kms downstream in 4 hrs. Find the speed of the boat in still water and the speed of the water current?

(a) 1/2 kmph
(b) 7/12 kmph
(c) 5 kmph
(d) none of these

Ans. (b)

A goat is tied to one corner of a square plot of side 12m by a rope 7m long. Find the area it can graze?

(a) 38.5 sq.m
(b) 155 sq.m
(c) 144 sq.m
(d) 19.25 sq.m

Ans. (a)

Mr. Shah decided to walk down the escalator of a tube station. He found that if he walks down 26 steps, he requires 30 seconds to reach the bottom. However, if he steps down 34 stairs he would only require 18 seconds to get to the bottom. If the time is measured from the moment the top step begins to descend to the time he steps off the last step at the bottom, find out the height of the stair way in steps?

Ans.46 steps.

The average age of 10 members of a committee is the same as it was 4 years ago, because an old member has been replaced by a young member. Find how

much younger is the new member ?

Ans.40 years.

ABCE is an isosceles trapezoid and ACDE is a rectangle. AB = 10 and EC = 20. What is the length of AE?

Ans. AE = 10.

In the given figure, PA and PB are tangents to the circle at A and B respectively and the chord BC is parallel to tangent PA. If AC = 6 cm, and length of the tangent AP is 9 cm, then what is the length of the chord BC?

Ans. BC = 4 cm.

Three cards are drawn at random from an ordinary pack of cards. Find the probability that they will consist of a king, a queen and an ace.

Ans. 64/2210.

A number of cats got together and decided to kill between them 999919 mice. Every cat killed an equal number of mice. Each cat killed more mice than there were cats. How many cats do you think there were ?

Ans. 991.

If Log2 x - 5 Log x + 6 = 0, then what would the value / values of x be?

Ans. x = e2 or e3.

The square of a two digit number is divided by half the number. After 36 is added to the quotient, this sum is then divided by 2. The digits of the resulting number are the same as those in the original number, but they are in reverse order. The ten's place of the original number is equal to twice the difference between its digits. What is the number?

Ans. 46

Can you tender a one rupee note in such a manner that there shall be total 50 coins but none of them would be 2 paise coins.?

Ans. 45 one paisa coins, 2 five paise coins, 2 ten paise coins, and 1 twenty-five paise coins.

A monkey starts climbing up a tree 20ft. tall. Each hour, it hops 3ft. and slips back 2ft. How much time would it take the monkey to reach the top?

Ans.18 hours.

What is the missing number in this series?
8 2 14 6 11 ? 14 6 18 12

Ans. 9

A certain type of mixture is prepared by mixing brand A at Rs.9 a kg. with brand B at Rs.4 a kg. If the mixture is worth Rs.7 a kg., how many kgs. of brand A are needed to make 40kgs. of the mixture?

Ans. Brand A needed is 24kgs.

A wizard named Nepo says "I am only three times my son's age. My father is 40 years more than twice my age. Together the three of us are a mere 1240 years old." How old is Nepo?

Ans. 360 years old.

One dog tells the other that there are two dogs in front of me. The other one also shouts that he too had two behind him. How many are they?

Ans. Three.

A man ate 100 bananas in five days, each day eating 6 more than the previous day. How many bananas did he eat on the first day?

Ans. Eight.

If it takes five minutes to boil one egg, how long will it take to boil four eggs?

Ans. Five minutes.

The minute hand of a clock overtakes the hour hand at intervals of 64 minutes of correct time. How much a day does the clock gain or lose?

Ans. 32 8/11 minutes.

Solve for x and y: 1/x - 1/y = 1/3, 1/x2 + 1/y2 = 5/9.

Ans. x = 3/2 or -3 and y = 3 or -3/2.

Daal is now being sold at Rs. 20 a kg. During last month its rate was Rs. 16 per kg. By how much percent should a family reduce its consumption so as to keep the expenditure fixed?

Ans. 20 %.

Find the least value of 3x + 4y if x2y3 = 6.

Ans. 10.

Can you find out what day of the week was January 12, 1979?

Ans. Friday.

A garrison of 3300 men has provisions for 32 days, when given at a rate of 850 grams per head. At the end of 7 days a reinforcement arrives and it was found that now the provisions will last 8 days less, when given at the rate of 825 grams per head. How, many more men can it feed?

Ans. 1700 men.

From 5 different green balls, four different blue balls and three different red balls, how many combinations of balls can be chosen taking at least one green and one blue ball?

Ans. 3720.

Three pipes, A, B, & C are attached to a tank. A & B can fill it in 20 & 30 minutes respectively while C can empty it in 15 minutes. If A, B & C are kept open successively for 1 minute each, how soon will the tank be filled?

Ans. 167 minutes.

For a motorist there are three ways going from City A to City C. By way of bridge the distance is 20 miles and toll is $0.75. A tunnel between the two cities is a distance of 10 miles and toll is $1.00 for the vehicle and driver and $0.10 for each passenger. A two-lane highway without toll goes east for 30 miles to city B and then 20 miles in a northwest direction to City C.

1. Which is the shortest route from B to C

(a) Directly on toll free highway to City C
(b) The bridge
(c) The Tunnel
(d) The bridge or the tunnel
(e) The bridge only if traffic is heavy on the toll free highway

Ans. (a)

2. The most economical way of going from City A to City B, in terms of toll and distance is to use the

(a) tunnel
(b) bridge
(c) bridge or tunnel
(d) toll free highway
(e) bridge and highway

Ans. (a)

3. Jim usually drives alone from City C to City A every working day. His firm deducts a percentage of employee pay for lateness. Which factor would most influence his choice of the bridge or the tunnel ?

(a) Whether his wife goes with him
(b) scenic beauty on the route
(c) Traffic conditions on the road, bridge and tunnel
(d) saving $0.25 in tolls
(e) price of gasoline consumed in covering additional 10 miles on the bridge

Ans. (a)

4. In choosing between the use of the bridge and the tunnel the chief factor(s) would be:
I. Traffic and road conditions
II. Number of passengers in the car
III. Location of one's homes in the center or outskirts of one of the cities
IV. Desire to save $0.25

(a) I only
(b) II only
(c) II and III only
(d) III and IV only
(e) I and II only

Ans. (a)

The letters A, B, C, D, E, F and G, not necessarily in that order, stand for seven consecutive integers from 1 to 10
D is 3 less than A
B is the middle term
F is as much less than B as C is greater than D
G is greater than F

1. The fifth integer is
(a) A
(b) C
(c) D
(d) E
(e) F

Ans. (a)

2. A is as much greater than F as which integer is less than G
(a) A
(b) B
(c) C
(d) D
(e) E

Ans. (a)

3. If A = 7, the sum of E and G is
(a) 8
(b) 10
(c) 12
(d) 14
(e) 16

Ans. (a)

4. A - F = ?
(a) 1
(b) 2
(c) 3
(d) 4
(e) Cannot be determined

Ans. (a)

5. An integer T is as much greater than C as C is greater than E. T can be written as A + E. What is D?
(a) 2
(b) 3
(c) 4
(d) 5
(e) Cannot be determined

Ans. (a)

6. The greatest possible value of C is how much greater than the smallest possible value of D?
(a) 2
(b) 3
(c) 4
(d) 5
(e) 6

Ans. (a)

1. All G's are H's
2. All G's are J's or K's
3. All J's and K's are G's
4. All L's are K's
5. All N's are M's
6. No M's are G's

1. If no P's are K's, which of the following must be true?

(a) All P's are J's
(b) No P is a G
(c) No P is an H
(d) If any P is an H it is a G
(e) If any P is a G it is a J

Ans. (a)

2. Which of the following can be logically deduced from the conditions stated?

(a) No M's are H's
(b) No M's that are not N's are H's
(c) No H's are M's
(d) Some M's are H's
(e) All M's are H's

Ans. (a)

3. Which of the following is inconsistent with one or more of the conditions?

(a) All H's are G's
(b) All H's that are not G's are M's

(c) Some H's are both M's and G's
(d) No M's are H's
(e) All M's are H's

Ans. (a)

4. The statement "No L's are J's" is
I. Logically deducible from the conditions stated
II. Consistent with but not deducible from the conditions stated
III. Deducible from the stated conditions together with the additional statement "No J's are K's"

(a) I only
(b) II only
(c) III only
(d) II and III only
(e) Neither I, II nor III

Ans. (a)

In country X, democratic, conservative and justice parties have fought three civil wars in twenty years. TO restore stability an agreement is reached to rotate the top offices President, Prime Minister and Army Chief among the parties so that each party controls one and only one office at all times. The three top office holders must each have two deputies, one from each of the other parties. Each deputy must choose a staff composed of equally members of his or her chiefs party and member of the third party.

1. When Justice party holds one of the top offices, which of the following cannot be true

(a) Some of the staff members within that office are justice party members
(b) Some of the staff members within that office are democratic party members
(c) Two of the deputies within the other offices are justice party members
(d) Two of the deputies within the other offices are conservative party members
(e) Some of the staff members within the other offices are justice party members.

Ans. (a)

2. When the democratic party holds presidency, the staff of the prime minister's deputies are composed
I. One-fourth of democratic party members
II. One-half of justice party members and one-fourth of conservative party members
III. One-half of conservative party members and one-fourth of justice party members.

(a) I only
(b) I and II only
(c) II or III but not both
(d) I and II or I and III
(e) None of these

Ans. (a)

3. Which of the following is allowable under the rules as stated:

(a) More than half of the staff within a given office belonging to a single party
(b) Half of the staff within a given office belonging to a single party
(c) Any person having a member of the same party as his or her immediate superior
(d) Half the total number of staff members in all three offices belonging to a single party
(e) Half the staff members in a given office belonging to parties different from the party of the top office holder in that office.

Ans. (a)

4. The office of the Army Chief passes from Conservative to Justice party. Which of the following must be fired.

(a) The democratic deputy and all staff members belonging to Justice party
(b) Justice party deputy and all his or hers staff members
(c) Justice party deputy and half of his Conservative staff members in the chief of staff office
(d) The Conservative deputy and all of his or her staff members belonging to Conservative party
(e) No deputies and all staff members belonging to conservative parties.

Ans. (a)

In recommendations to the board of trustees a tuition increase of $500 per year, the president of the university said "There were no student demonstrations over the previous increases of $300 last year and $200 the year before". If the president's statement is accurate then which of the following can be validly inferred from the information given:
I. Most students in previous years felt that the increases were justified because of increased operating costs.
II. Student apathy was responsible for the failure of students to protest the previous tuition increases.
III. Students are not likely to demonstrate over new tuition increases.

(a) I only
(b) II only

(c) I or II but not both
(d) I, II and III
(e) None

Ans. (a)

The office staff of XYZ corporation presently consists of three bookkeepers--A, B, C and 5 secretaries D, E, F, G, H. The management is planning to open a new office in another city using 2 bookkeepers and 3 secretaries of the present staff . To do so they plan to separate certain individuals who don't function well together. The following guidelines were established to set up the new office

I. Bookkeepers A and C are constantly finding fault with one another and should not be sent together to the new office as a team
II. C and E function well alone but not as a team , they should be seperated
III. D and G have not been on speaking terms and shouldn't go together
IV Since D and F have been competing for promotion they shouldn't be a team

1.If A is to be moved as one of the bookkeepers, which of the following cannot be a possible working unit.

A.ABDEH
B.ABDGH
C.ABEFH
D.ABEGH

Ans.B

2.If C and F are moved to the new office, how many combinations are possible

A.1
B.2
C.3
D.4

Ans.A

3.If C is sent to the new office, which member of the staff cannot go with C

A.B
B.D
C.F
D.G

Ans.B

4.Under the guidelines developed, which of the following must go to the new office

A.B
B.D
C.E
D.G

Ans.A

5.If D goes to the new office, which of the following is/are true

I.C cannot go
II.A cannot go
III.H must also go

A.I only
B.II only
C.I and II only
D.I and III only

Ans.D

After months of talent searching for an administrative assistant to the president of the college the field of applicants has been narrowed down to 5--A, B, C, D, E .It was announced that the finalist would be chosen after a series of all-day group personal interviews were held. The examining committee agreed upon the following procedure

I.The interviews will be held once a week
II.3 candidates will appear at any all-day interview session
III.Each candidate will appear at least once
IV.If it becomes necessary to call applicants for additonal interviews, no more 1 such applicant should be asked to appear the next week
V.Because of a detail in the written applications,it was agreed that whenever candidate B appears, A should also be present.
VI.Because of travel difficulties it was agreed that C will appear for only 1 interview.

1.At the first interview the following candidates appear A,B,D. Which of the following combinations can be called for the interview to be held next week.

A.BCD
B.CDE
C.ABE
D.ABC

Ans.B

2.Which of the following is a possible sequence of combinations for interviews in 2 successive weeks

A.ABC;BDE
B.ABD;ABE
C.ADE;ABC
D.BDE;ACD

Ans.C

3.If A ,B and D appear for the interview and D is called for additional interview the following week, which 2 candidates may be asked to appear with D?

I. A
II B
III.C
IV.E

A.I and II
B.I and III only
C.II and III only
D.III and IV only

Ans.D

4.Which of the following correctly state(s) the procedure followed by the search committee

I.After the second interview all applicants have appeared at least once
II.The committee sees each applicant a second time
III.If a third session,it is possible for all applicants to appear at least twice

A.I only
B.II only
C.III only
D.Both I and II

Ans.A

A certain city is served by subway lines A,B and C and numbers 1 2 and 3 When it snows , morning service on B is delayed When it rains or snows , service

on A, 2 and 3 are delayed both in the morning and afternoon When temp. falls below 30 degrees farenheit afternoon service is cancelled in either the A line or the 3 line, but not both. When the temperature rises over 90 degrees farenheit, the afternoon service is cancelled in either the line C or the 3 line but not both. When the service on the A line is delayed or cancelled, service on the C line which connects the A line, is delayed. When service on the 3 line is cancelled, service on the B line which connects the 3 line is delayed.

Q1. On Jan 10th, with the temperature at 15 degree farenheit, it snows all day. On how many lines will service be affected, including both morning and afternoon.

(A) 2
(B) 3
(C) 4
(D) 5

Ans. D

Q2. On Aug 15th with the temperature at 97 degrees farenheit it begins to rain at 1 PM. What is the minimum number of lines on which service will be affected?

(A) 2
(B) 3
(C) 4
(D) 5

Ans. C

Q3. On which of the following occasions would service be on the greatest number of lines disrupted.

(A) A snowy afternoon with the temperature at 45 degree farenheit
(B) A snowy morning with the temperature at 45 degree farenheit
(C) A rainy afternoon with the temperature at 45 degree farenheit
(D) A rainy afternoon with the temperature at 95 degree farenheit

Ans. B

In a certain society, there are two marriage groups, red and brown. No marriage is permitted within a group. On marriage, males become part of their wives groups; women remain in their own group. Children belong to the same group as their parents. Widowers and divorced males revert to the group of their birth. Marriage to more than one person at the same time and marriage to a direct descendant are forbidden

Q1. A brown female could have had

I. A grandfather born Red
II. A grandmother born Red
III Two grandfathers born Brown

(A) I only
(B) III only
(C) I, II and III
(D) I and II only

Ans. D

Q2. A male born into the brown group may have

(A) An uncle in either group
(B) A brown daughter
(C) A brown son
(D) A son-in-law born into red group

Ans. A

Q3. Which of the following is not permitted under the rules as stated.

(A) A brown male marrying his father's sister
(B) A red female marrying her mother's brother
(C) A widower marrying his wife's sister
(D) A widow marrying her divorced daughter's ex-husband

Ans. B

Q4. If widowers and divorced males retained their group they had upon marrying which of the following would be permissible (Assume that no previous marriage occurred)

(A) A woman marrying her dead sister's husband
(B) A woman marrying her divorced daughter's ex-husband
(C) A widower marrying his brother's daughter
(D) A woman marrying her mother's brother who is a widower.

Ans. D

There are six steps that lead from the first to the second floor. No two people can be on the same step
Mr. A is two steps below Mr. C
Mr. B is a step next to Mr. D
Only one step is vacant (No one standing on that step)

Denote the first step by step 1 and second step by step 2 etc.

1. If Mr. A is on the first step, Which of the following is true?
(a) Mr. B is on the second step
(b) Mr. C is on the fourth step.
(c) A person Mr. E, could be on the third step
(d) Mr. D is on higher step than Mr. C.

Ans: (d)

2. If Mr. E was on the third step & Mr. B was on a higher step than Mr. E which step must be vacant
(a) step 1
(b) step 2
(c) step 4
(d) step 5
(e) step 6

Ans: (a)

3. If Mr. B was on step 1, which step could A be on?
(a) 2&e only
(b) 3&5 only
(c) 3&4 only
(d) 4&5 only
(e) 2&4 only

Ans: (c)

4. If there were two steps between the step that A was standing and the step that B was standing on, and A was on a higher step than D , A must be on step

(a) 2
(b) 3
(c) 4
(d) 5
(e) 6

Ans: (c)

5. Which of the following is false

i. B&D can be both on odd-numbered steps in one configuration
ii. In a particular configuration A and C must either both an odd numbered steps or both an even-numbered steps
iii. A person E can be on a step next to the vacant step.

(a) i only
(b) ii only
(c) iii only
(d) both i and iii

Ans: (c)

Six swimmers A, B, C, D, E, F compete in a race. The outcome is as follows.
i. B does not win.
ii. Only two swimmers separate E & D
iii. A is behind D & E
iv. B is ahead of E , with one swimmer intervening
v. F is a head of D

1. Who stood fifth in the race ?
(a) A
(b) B
(c) C
(d) D
(e) E

Ans: (e)

2. How many swimmers separate A and F ?
(a) 1
(b) 2
(c) 3
(d) 4
(e) cannot be determined

Ans: (d)

3. The swimmer between C & E is
(a) none
(b) F
(c) D
(d) B
(e) A

Ans: (a)

4. If the end of the race, swimmer D is disqualified by the Judges then swimmer B finishes in which place
(a) 1
(b) 2

(c) 3
(d) 4
(e) 5

Ans: (b)

Five houses lettered A,B,C,D, & E are built in a row next to each other. The houses are lined up in the order A,B,C,D, & E. Each of the five houses has a colored chimney. The roof and chimney of each housemust be painted as follows.
i. The roof must be painted either green,red ,or yellow.
ii. The chimney must be painted either white, black, or red.
iii. No house may have the same color chimney as the color of roof.
iv. No house may use any of the same colors that the every next house uses.
v. House E has a green roof.
vi. House B has a red roof and a black chimney

1. Which of the following is true ?
(a) At least two houses have black chimney.
(b) At least two houses have red roofs.
(c) At least two houses have white chimneys
(d) At least two houses have green roofs
(e) At least two houses have yellow roofs

Ans: (c)

2. Which must be false ?
(a) House A has a yellow roof
(b) House A & C have different color chimney
(c) House D has a black chimney
(d) House E has a white chimney
(e) House B&D have the same color roof.

Ans: (b)

3. If house C has a yellow roof. Which must be true.
(a) House E has a white chimney
(b) House E has a black chimney
(c) House E has a red chimney
(d) House D has a red chimney
(e) House C has a black chimney

Ans: (a)

4. Which possible combinations of roof & chimney can house
I. A red roof 7 a black chimney
II. A yellow roof & a red chimney
III. A yellow roof & a black chimney

(a) I only
(b) II only
(c) III only
(d) I & II only
(e) I&II&III

Ans: (e)

Find x+2y
(i). x+y=10
(ii). 2x+4y=20

Ans: (b)

Is angle BAC is a right angle
(i) AB=2BC
(2) BC=1.5AC

Ans: (e)

Is x greater than y
(i) x=2k
(ii) k=2y

Ans: (e)

One of the following is my secret word: AIM DUE MOD OAT TIE. With the list in front of you, if I were to tell you any one of my secret word, then you would be able to tell me the number of vowels in my secret word. Which is my secret word?

Ans.TIE

One of Mr. Horton, his wife, their son, and Mr. Horton's mother is a doctor and another is a lawyer.
a)If the doctor is younger than the lawyer, then the doctor and the lawyer are not blood relatives.
b)If the doctor is a woman, then the doctor and the lawyer are blood relatives.
c)If the lawyer is a man, then the doctor is a man.
Whose occupation you know?

Ans.Mr. Horton:he is the doctor.

Mr. and Mrs. Aye and Mr. and Mrs. Bee competed in a chess tournament. Of the three games played:
a)In only the first game were the two players married to each other.

b)The men won two games and the women won one game.
c)The Ayes won more games than the Bees.
d)Anyone who lost game did not play the subsequent game.
Who did not lose a game?

Ans.Mrs.Bee did not lose a game.

Three piles of chips--pile I consists one chip, pile II consists of chips, and pile III consists of three chips--are to be used in game played by Anita and Brinda. The game requires:
a)That each player in turn take only one chip or all chips from just one pile.
b)That the player who has to take the last chip loses.
c)That Anita now have her turn.
From which pile should Anita draw in order to win?

Ans.Pile II

Of Abdul, Binoy, and Chandini:
a)Each member belongs to the Tee family whose members always tell the truth or to the El family whose members always lie.
b)Abdul says "Either I belong or Binoy belongs to a different family from the other two."
Whose family do you name of?

Ans.Binoy's family--El.

In a class composed of x girls and y boys what part of the class is composed of girls
A.y/(x + y)
B.x/xy
C.x/(x + y)
D.y/xy

Ans.C

What is the maximum number of half-pint bottles of cream that can be filled with a 4-gallon can of cream(2 pt.=1 qt. and 4 qt.=1 gal)

A.16
B.24
C.30
D.64

Ans.D

f the operation,^ is defined by the equation x ^ y = 2x + y, what is the value of a in 2 ^ a = a ^ 3

A.0
B.1
C.-1
D.4

Ans.B

A coffee shop blends 2 kinds of coffee, putting in 2 parts of a 33p. a gm. grade to 1 part of a 24p. a gm. If the mixture is changed to 1 part of the 33p. a gm. to 2 parts of the less expensive grade, how much will the shop save in blending 100 gms.

A.Rs.90
B.Rs.1.00
C.Rs.3.00
D.Rs.8.00

Ans.C

There are 200 questions on a 3 hr examination.Among these questions are 50 mathematics problems.It is suggested that twice as much time be spent on each maths problem as for each other question.How many minutes should be spent on mathematics problems

A.36
B.72
C.60
D.100

Ans.B

In a group of 15,7 have studied Latin, 8 have studied Greek, and 3 have not studied either. How many of these studied both Latin and Greek

A.0
B.3
C.4
D.5

Ans.B

If 13 = 13w/(1-w) ,then (2w)2 =

A.1/4
B.1/2
C.1
D.2

Ans.C

If a and b are positive integers and (a-b)/3.5 = 4/7, then

(A) b < a
(B) b > a
(C) b = a
(D) b >= a

Ans. A

In june a baseball team that played 60 games had won 30% of its game played. After a phenomenal winning streak this team raised its average to 50% .How many games must the team have won in a row to attain this average?

A. 12
B. 20
C. 24
D. 30

Ans. C

M men agree to purchase a gift for Rs. D. If three men drop out how much more will each have to contribute towards the purchase of the gift/

A. D/(M-3)
B. MD/3
C. M/(D-3)
D. 3D/(M2-3M)

Ans. D

A company contracts to paint 3 houses. Mr.Brown can paint a house in 6 days while Mr.Black would take 8 days and Mr.Blue 12 days. After 8 days Mr.Brown goes on vacation and Mr. Black begins to work for a period of 6 days. How many days will it take Mr.Blue to complete the contract?

A. 7
B. 8
C. 11
D. 12

Ans.C

2 hours after a freight train leaves Delhi a passenger train leaves the same station travelling in the same direction at an average speed of 16 km/hr. After

travelling 4 hrs the passenger train overtakes the freight train. The average speed of the freight train was?

A. 30
B. 40
C.58
D. 60

Ans. B

If 9x-3y=12 and 3x-5y=7 then 6x-2y = ?

A.-5
B. 4
C. 2
D. 8

Ans. D

There are 5 red shoes, 4 green shoes. If one draw randomly a shoe what is the probability of getting a red shoe

Ans 5c1/ 9c1

What is the selling price of a car? If the cost of the car is Rs.60 and a profit of 10% over selling price is earned

Ans: Rs 66/-

1/3 of girls , 1/2 of boys go to canteen .What factor and total number of classmates go to canteen.

Ans: Cannot be determined.

The price of a product is reduced by 30% . By what percentage should it be increased to make it 100%

Ans: 42.857%

There is a square of side 6cm . A circle is inscribed inside the square. Find the ratio of the area of circle to square.

Ans. 11/14

There are two candles of equal lengths and of different thickness. The thicker one lasts of six hours. The thinner 2 hours less than the thicker one. Ramesh lights the two candles at the same time. When he went to bed he saw the thicker

one is twice the length of the thinner one. How long ago did Ramesh light the two candles .

Ans: 3 hours.

If PQRST is a parallelogram what it the ratio of triangle PQS & parallelogram PQRST .

Ans: 1:2

The cost of an item is Rs 12.60. If the profit is 10% over selling price what is the selling price ?

Ans: Rs 13.86/-

There are 6 red shoes & 4 green shoes . If two of red shoes are drawn what is the probability of getting red shoes

Ans: 6c2/10c2

To 15 lts of water containing 20% alcohol, we add 5 lts of pure water. What is % alcohol.

Ans : 15%

A worker is paid Rs.20/- for a full days work. He works 1,1/3,2/3,1/8.3/4 days in a week. What is the total amount paid for that worker ?

Ans : 57.50

If the value of x lies between 0 & 1 which of the following is the largest?

(a) x
(b) x2
(c) -x
(d) 1/x

Ans : (d)

If the total distance of a journey is 120 km .If one goes by 60 kmph and comes back at 40kmph what is the average speed during the journey?

Ans: 48kmph

A school has 30% students from Maharashtra .Out of these 20% are Bombay students. Find the total percentage of Bombay?

Ans: 6%

An equilateral triangle of sides 3 inch each is given. How many equilateral triangles of side 1 inch can be formed from it?

Ans: 9

If A/B = 3/5,then 15A = ?

Ans : 9B

Each side of a rectangle is increased by 100% .By what percentage does the area increase?

Ans : 300%

Perimeter of the back wheel = 9 feet, front wheel = 7 feet on a certain distance, the front wheel gets 10 revolutions more than the back wheel .What is the distance?

Ans : 315 feet.

Perimeter of front wheel =30, back wheel = 20. If front wheel revolves 240 times. How many revolutions will the back wheel take?

Ans: 360 times

20% of a 6 litre solution and 60% of 4 litre solution are mixed. What percentage of the mixture of solution

Ans: 36%

City A's population is 68000, decreasing at a rate of 80 people per year. City B having population 42000 is increasing at a rate of 120 people per year. In how many years both the cities will have same population?

Ans: 130 years

Two cars are 15 kms apart. One is turning at a speed of 50kmph and the other at 40kmph . How much time will it take for the two cars to meet?

Ans: 3/2 hours

A person wants to buy 3 paise and 5 paise stamps costing exactly one rupee. If he buys which of the following number of stamps he won't able to buy 3 paise stamps.

Ans: 9

Which of the following fractions is less than 1/3

(a) 22/62
(b) 15/46
(c) 2/3
(d) 1

Ans: (b)

There are two circles, one circle is inscribed and another circle is circumscribed over a square. What is the ratio of area of inner to outer circle?

Ans: 1 : 2

Three types of tea the a,b,c costs Rs. 95/kg,100/kg and70/kg respectively. How many kgs of each should be blended to produce 100 kg of mixture worth Rs.90/kg, given that the quntities of band c are equal

a)70,15,15
b)50,25,25
c)60,20,20
d)40,30,30

Ans. (b)

**in a class, except 18 all are above 50 years.
15 are below 50 years of age. How many people are there**

(a) 30
(b) 33
(c) 36
(d) none of these.

Ans. (d)

If a boat is moving in upstream with velocity of 14 km/hr and goes downstream with a velocity of 40 km/hr, then what is the speed of the stream ?

(a) 13 km/hr
(b) 26 km/hr
(c) 34 km/hr
(d) none of these

Ans. A

Find the value of (0.75 * 0.75 * 0.75 - 0.001) / (0.75 * 0.75 - 0.075 + 0.01)

(a) 0.845
(b) 1.908
(c) 2.312
(d) 0.001

Ans. A

A can have a piece of work done in 8 days, B can work three times faster than the A, C can work five times faster than A. How many days will they take to do the work together ?

(a) 3 days
(b) 8/9 days
(c) 4 days
(d) can't say

Ans. B

A car travels a certain distance taking 7 hrs in forward journey, during the return journey increased speed 12km/hr takes the times 5 hrs. What is the distance travelled

(a) 210 kms
(b) 30 kms
(c) 20 kms
(c) none of these

Ans. B

Find (7x + 4y) / (x-2y) if x/2y = 3/2 ?

(a) 6
(b) 8
(c) 7
(d) data insufficient

Ans. C

If on an item a company gives 25% discount, they earn 25% profit. If they now give 10% discount then what is the profit percentage.

(a) 40%
(b) 55%
(c) 35%
(d) 30%

Ans. D

A certain number of men can finish a piece of work in 10 days. If however there were 10 men less it will take 10 days more for the work to be finished. How many men were there originally?

(a) 110 men
(b) 130 men
(c) 100 men
(d) none of these

Ans. A

In simple interest what sum amounts of Rs.1120/- in 4 years and Rs.1200/- in 5 years ?

(a) Rs. 500
(b) Rs. 600
(c) Rs. 800
(d) Rs. 900

Ans. C

If a sum of money compound annually amounts of thrice itself in 3 years. In how many years will it become 9 times itself.

(a) 6
(b) 8
(c) 10
(d) 12

Ans A

Two trains move in the same direction at 50 kmph and 32 kmph respectively. A man in the slower train observes the 15 seconds elapse before the faster train completely passes by him. What is the length of faster train ?

(a) 100m
(b) 75m
(c) 120m
(d) 50m

Ans B

How many mashes are there in 1 square meter of wire gauge if each mesh is 8mm long and 5mm wide ?

(a) 2500
(b) 25000
(c) 250
(d) 250000

Ans B

x% of y is y% of ?
(a) x/y
(b) 2y
(c) x
(d) can't be determined

Ans. C

The price of sugar increases by 20%, by what % should a housewife reduce the consumption of sugar so that expenditure on sugar can be same as before ?
(a) 15%
(b) 16.66%
(c) 12%
(d) 9%

Ans B

A man spends half of his salary on household expenses, 1/4th for rent, 1/5th for travel expenses, the man deposits the rest in a bank. If his monthly deposits in the bank amount 50, what is his monthly salary ?
(a) Rs.500
(b) Rs.1500
(c) Rs.1000
(d) Rs. 900

Ans C

15 men take 21 days of 8 hrs. each to do a piece of work. How many days of 6 hrs. each would it take for 21 women if 3 women do as much work as 2 men?
(a) 30
(b) 20
(c) 19
(d) 29

Ans. A

A cylinder is 6 cms in diameter and 6 cms in height. If spheres of the same size are made from the material obtained, what is the diameter of each sphere?
(a) 5 cms

(b) 2 cms
(c) 3 cms
(d) 4 cms

Ans C

The difference b/w the compound interest payble half yearly and the simple interest on a certain sum lent out at 10% p.a for 1 year is Rs 25. What is the sum?
(a) Rs. 15000
(b) Rs. 12000
(c) Rs. 10000
(d) none of these

Ans C

What is the smallest number by which 2880 must be divided in order to make it into a perfect square ?

(a) 3
(b) 4
(c) 5
(d) 6

Ans. C

A father is 30 years older than his son however he will be only thrice as old as the son after 5 years what is father's present age ?

(a) 40 yrs
(b) 30 yrs
(c) 50 yrs
(d) none of these

Ans. A

If an item costs Rs.3 in '99 and Rs.203 in '00.What is the % increase in price?

(a) 200/3 %
(b) 200/6 %
(c) 100%
(d) none of these

Ans. A

5 men or 8 women do equal amount of work in a day. a job requires 3 men and 5 women to finish the job in 10 days how many woman are required to finish the

job in 14 days.

a) 10
b) 7
c) 6
d) 12

Ans 7

A simple interest amount of rs 5000 for six month is rs 200. what is the anual rate of interest?

a) 10%
b) 6%
c) 8%
d) 9%

Ans 8%

In objective test a correct answer score 4 marks and on a wrong answer 2 marks are ---. a student score 480 marks from 150 question. how many answer were correct?

a) 120
b) 130
c) 110
d) 150

Ans130.

An article sold at amount of 50% the net sale price is rs 425 .what is the list price of the article?

a) 500
b) 488
c) 480
d) 510

Ans 500

A man leaves office daily at 7pm A driver with car comes from his home to pick him from office and bring back home One day he gets free at 5:30 and instead of waiting for driver he starts walking towards home. In the way he meets the car and returns home on car He reaches home 20 minutes earlier than usual. In how much time does the man reach home usually??

Ans. 1hr 20min

A works thrice as much as B. If A takes 60 days less than B to do a work then find the number of days it would take to complete the work if both work together?

Ans. 22½days

How many 1's are there in the binary form of 8*1024 + 3*64 + 3

Ans. 4

A boy has Rs 2. He wins or loses Re 1 at a time If he wins he gets Re 1 and if he loses the game he loses Re 1.
He can loose only 5 times. He is out of the game if he earns Rs 5.
Find the number of ways in which this is possible?

Ans. 16

If there are 1024*1280 pixels on a screen and each pixel can have around 16 million colors
Find the memory required for this?

Ans. 4MB

On a particular day A and B decide that they would either speak the truth or will lie.
C asks A whether he is speaking truth or lying?
He answers and B listens to what he said. C then asks B what A has said B says "A says that he is a liar"
What is B speaking ?

(a) Truth
(b) Lie
(c) Truth when A lies
(d) Cannot be determined

Ans. (b)

What is the angle between the two hands of a clock when time is 8:30

Ans. 75(approx)

A man walks east and turns right and then from there to his left and then 45degrees to his right. In which direction did he go

Ans. North west

A man shows his friend a woman sitting in a park and says that she the daughter of my grandmother's only son. What is the relation between the two

Ans. Daughter

If a=2/3b , b=2/3c, and c=2/3d what part of d is b/

(a) 8/27
(b) 4/9
(c) 2/3
(d) 75%
(e) 4/3

Ans. (b)

Successive discounts of 20% and 15% are equal to a single discount of

(a) 30%
(b) 32%
(c) 34%
(d) 35%
(e) 36

Ans. (b)

The petrol tank of an automobile can hold g liters. If a liters was removed when the tank was full, what part of the full tank was removed?

(a)g-a
(b)g/a
(c) a/g
(d) (g-a)/a
(e) (g-a)/g

Ans. (c)

If x/y=4 and y is not '0' what % of x is 2x-y

(a)150%
(b)175%
(c)200%
(d)250%

Ans. (b)

A three digit number consists of 9,5 and one more number . When these digits are reversed and then subtracted from the original number the answer yielded

will be consisting of the same digits arranged yet in a different order. What is the other digit?

Sol. Let the digit unknown be n.
The given number is then 900+50+n=950+n.

When reversed the new number is 100n+50+9=59+100n.
Subtracting these two numbers we get 891-99n.
The digit can be arranged in 3 ways or 6 ways.
We have already investigated 2 of these ways.
We can now try one of the remaining 4 ways. One of these is n 95
100n+90+5=891-99n
or 199n =796
so, n=4
the unknown digit is 4.

A farmer built a fence around his 17 cows, in a square shaped region. He used 27 fence poles on each side of the square. How many poles did he need altogether???

Ans.104 poles

Sol. Here 25 poles Must be there on each side .And around four corners 4 poles will be present. 4*25+4=100+4=104 poles.

On the first test of the semester, kiran scored a 60. On the last test of the semester, kiran scored 75% By what percent did kiran's score improve?

Ans: 25%

Sol. In first test kiran got 60
In last test he got 75.
% increase in test (60(x+100))/100=75
0.6X+60=75
0.6X=15
X=15/0.6=25%

A group consists of equal number of men and women. Of them 10% of men and 45% of women are unemployed. If a person is randomly selected from the group. Find the probability for the selected person to be an employee.

Ans:29/40

Sol: Assume men=100,women=100 then employed men & women r (100-10)+(100-45)=145
So probability for the selected person to be an employee=145/200=29/40

Randy's chain of used car dealership sold 16,400 cars in 1998. If the chain sold 15,744 cars in 1999, by what percent did the number of cars sold decrease?

Ans: 4%

Sol. Let percentage of decrease is x , then
16400(100-x)/100=15744
16400-15744=164x
x=656/164=4%

A radio when sold at a certain price gives a gain of 20%. What will be the gain percent, if sold for thrice the price?
A) 260%
B) 150%
C) 100%
D) 50%
E) None of these

Ans: 260%

Sol. Let x be original cost of the radio.
The solding price = (100+20)x=120x
If , it is sold for thrice the price ,then 3*120x=360x
So, gain percent is (360-100)=260%.

If the Arithmetic mean is 34 and geometric mean is 16 then what is greates number in that series of numbers?

Ans. 64

Sol. Let two numbers be x, y;
Arthmetic mean=34=>(x+y)/2=34
x+y=68
geometric mean=16=>(xy)pow 1/2=16
xy=16*16=256
By trail and error 16*16=64*4
And 64+4/2=34
So the greatest number int hat series is 64.

The diameter of the driving wheel of a bus is 140cm. How many revolutions per minute must the wheel make in order to keep a speed of 66 kmph?

Ans. 250

Sol. Distance to be covered in 1 min=(66*1000)/60 m=1100m
Circumference of the wheel =(2*22/7*0.70)m=4.4m.
So, Number of revolutions per min=1100/4.4=250.

The boys and girls in a college are in the ratio 3:2. If 20% of the boys and 25% of the girls are adults, the percentage of students who are not adults is:??

Ans.78%

Sol: Suppose boys = 3x and girls = 2x
Not adults = (80*3x/100) + (75*2x/100) = 39x/10
Required percentage = (39x/10)*(1/5x)*100 = 78%

Vivek travelled 1200km by air which formed 2/5 of his trip. One third of the whole trip , he travelled by car and the rest of the journey he performed by train. The distance travelled by train was???

Ans.800km

Sol: Let the total trip be x km.
Then 2x/5=1200
x=1200*5/2=3000km
Distance travelled by car =1/3*3000=1000km
Journey by train =[3000-(1200+1000)]=800km.

In a college ,1/5 th of the girls and 1/8 th of the boys took part in a social camp. What of the total number of students in the college took part in the camp?

Ans: 2/13

Sol: Out of 5 girls 1 took part in the camp
out of 8 boys 1 took part in the camp
so, out of 13 students 2 took part in the camp.
So, 2/13of the total strength took part in the camp.

On sports day, if 30 children were made to stand in a column,16 columns could be formed. If 24 children were made to stand in a column , how many columns could be formed?

Ans. 20

Sol: Total number of children=30*16=480
Number of columns of 24 children each =480/24=20.

Two trains 200mts and 150mts are running on the parallel rails at this rate of 40km/hr and 45km/hr. In how much time will they cross each other if they are running in the same direction.

Ans: 252sec

Sol: Relative speed=45-40=5km/hr=25/18 mt/sec

Total distance covered =sum of lengths of trains =350mts.
So, time taken =350*18/25=252sec.

5/9 part of the population in a village are males. If 30% of the males are married, the percentage of unmarried females in the total population is:

Ans: (250/9)%

Sol: Let the population =x Males=(5/9)x
Married males = 30% of (5/9)x = x/6
Married females = x/6
Total females = (x-(5/9)x)=4x/9
Unmarried females = (4x/9 – x/6) = 5x/18
Required percentage = (5x/18 * 1/x * 100) = (250/9)%

From height of 8 mts a ball fell down and each time it bounces half the distance back. What will be the distance travelled

Ans.: 24

Sol. 8+4+4+2+2+1+1+0.5+0.5+ and etc .. =24

First day of 1999 is Sunday what day is the last day

Ans.: Monday

Increase area of a square by 69% by what percent should the side be increased

Ans.: 13

Sol:Area of square=x2
Then area of increase=100+69=169
square root of 169 i.e 13 .

Ten years ago, chandrawathi's mother was four times older than her daughter. After 10years, the mother will be twice older than daughter. The present age of Chandrawathi is:

Ans.20 years

Sol: Let Chandrawathi's age 10 years ago be x years.
Her mother's age 10 years ago = 4x
(4x+10)+10=2(x+10+10)
x=10
Present age of Chandrawathi = (x+10) = 20years

Finding the wrong term in the given series
7, 28, 63, 124, 215, 342, 511

Ans:28

Sol: Clearly, the correct sequence is
2^3 – 1, 3^3 – 1, 4^3 – 1, 5^3 – 1, ...
Therefore, 28 is wrong and should be replaced by (3^3 – 1) i.e, 26.

If a man walks at the rate of 5kmph, he misses a train by only 7min. However if he walks at the rate of 6 kmph he reaches the station 5 minutes before the arrival of the train. Find the distance covered by him to reach the station.

Ans:6km.

Sol: Let the required distance be x km.
Difference in the times taken at two speeds=12mins=1/5 hr.
Therefore x/5-x/6=1/5 or 6x-5x=6 or x=6km.
Hence ,the required distance is 6 km

Walking 5/6 of its usual speed, a train is 10min late. Find the usual time to cover the journey?

Ans:50 min

Sol: New speed = 5/6 of usual speed
New time = 6/5 of usual time
Therefore, (6/5 of usual time) – usual time = 10min
Therefore Usual time = 50min

A train running at 54 kmph takes 20 seconds to pass a platform. Next it takes 12 seconds to pass a man walking at 6 kmph in the same direction in which the train is going. Find the length of the train and the length of the platform.

Ans. length of the train=160m
length of the platform=140 m.

Sol: Let the length of the train be x meters and length of the platform be y meters.
Speed of the train relative to man=(54-6) kmph =48 kmph.
=(48*5/18) m/sec =40/3 m/sec.
In passing a man, the train covers its own length with relative speed.
Therefore, length of the train=(Relative speed *Time)
=(40/3 * 12) m =160 m.
Also, speed of the train=(54 * 5/18) m/sec=15 m/sec.
Therefore, x+y/2xy=20 or x+y=300 or y=(300-160 m=140 m.
Therefore, Length of the platform=140 m.

A man is standing on a railway bridge which is 180m long. He finds that a train crosses the bridge in 20seconds but himself in 8 seconds. Find the length of the train and its speed.

Ans: length of train=120m
Speed of train=54kmph

Sol: Let the length of the train be x meters
Then, the train covers x meters in 8 seconds and (x + 180) meters in 20 seconds.
Therefore x/8 = (x+180)/20 ó 20x = 8(x+180) ó x = 120
Therefore Length of the train = 120m
Speed of the train = 120/8 m/sec = 15 m/sec =15 * 18/5 kmph = 54kmph

A man sells an article at a profit of 25%. If he had bought it at 20 % less and sold it for Rs.10.50 less, he would have gained 30%. Find the cost price of the article?

Ans. Rs. 50.

Sol: Let the C.P be Rs.x.
1st S.P =125% of Rs.x.= 125*x/100= 5x/4.
2nd C.P=80% of x. = 80x/100 =4x/5.
2nd S.P =130% of 4x/5. = (130/100* 4x/5) = 26x/25.
Therefore, 5x/4-26x/25 = 10.50 or x = 10.50*100/21=50.
Hence, C.P = Rs. 50.

A grosser purchased 80 kg of rice at Rs.13.50 per kg and mixed it with 120 kg rice at Rs. 16 per kg. At what rate per kg should he sell the mixture to gain 16%?

Ans: Rs.17.40 per kg.

Sol: C.P of 200 kg of mix. = Rs (80*13.50+120*16) = Rs.3000.
S.P = 116% of Rs 3000= Rs (116*3000/100) = Rs.3480.
Rate of S.P of the mixture = Rs.3480/200.per kg. = Rs.17.40 per kg.

Two persons A and B working together can dig a trench in 8 hrs while A alone can dig it in 12 hrs. In how many hours B alone can dig such a trench?

Ans:24hours.

Sol: (A+B)'s one hour's work =1/8, A's one hour's work =1/12
Therefore, B's one hour's work = (1/8-1/12) =1/24.
Hence, B alone can dig the trench in 24 hours.

A and B can do a piece of work in 12 days ; B and C can do it in 20 days. In how many days will A, B and C finishes it working all together?

Also, find the number of days taken by each to finish it working alone?

Ans:60 days

Sol: (A+B)'s one day's work=1/12; (B+C)'s one day's work=1/15 and (A+C)'s one day's work=1/20.
Adding, we get: 2(A+B+C)'s one day's work = (1/12+1/15+1/20)=1/5.
Therefore, (A+B+C)'s one day's work=1/10.
Thus, A, B and C together can finish the work in 10 days.
Now, A's one day's work
= [(A+B+C)'s one day's work] – [(B+C)'s one day's work]
= 1/10-1/15)
= 1/30.
Therefore, A alone can finish the work in 30 days.
Similarly, B's 1 day's work = (1/10 -1/20) = 1/20.
Therefore, B alone can finish the work in 20 days.
And, C's 1 day's work= (1/10-1/12) = 1/60.
Therefore, C alone can finish the work in 60 days.

A is twice as good a workman as B and together they finish a piece of work in 18 days. In how many days will A alone finish the work?

Ans:27 days.

Sol: (A's 1 day's work): (B's 1 day's work) = 2:1.
(A + B)'s 1 day's work = 1/18.
Divide 1/18 in the ratio 2:1.
Therefore A's 1 day's work = (1/18 * 2/3) = 1/27.
Hence, A alone can finish the work in 27 days.

2 men and 3 boys can do a piece of work in 10 days while 3 men and 2 boys can do the same work in 8 days. In how many days can 2 men and 1 boy do the work?

Ans: 12 ½ days.

Sol: Let 1 man's 1 day's work = x and 1 boy's 1 day's work =y.
Then, 2x+3y=1/10 and 3x+2y=1/8.
Solving, we get: x=7/200 and y=1/100.
Therefore (2 men +1 boy)'s 1 day's work = (2*7/200 + 1*1/100) = 16/200 = 2/25.
So, 2 men and 1 boy together can finish the work in 25/2 =12 ½ days.

What was the day of the week on 12th January, 1979?

Ans: Friday

Sol: Number of odd days in (1600 + 300) years = (0 + 1) = 1 odd day.

78 years = (19 leap years + 59 ordinary years) = (38 + 59) odd days = 6 odd days
12 days of January have 5 odd days.
Therefore, total number of odd days= (1 + 6 + 5) = 5 odd days.
Therefore, the desired day was Friday.

Find the day of the week on 16th july, 1776.

Ans: Tuesday

Sol: 16th july, 1776 means = 1775 years + period from 1st january to 16th july
Now, 1600 years have 0 odd days.
100 years have 5 odd days.
75 years = 18 leap years + 57 ordinary years
= (36 + 57) odd days = 93 odd days
= 13 weeks + 2 odd days = 2 odd days
Therefore, 1775 years have (0 + 5 + 2) odd days = 0 odd days.
Now, days from 1st Jan to 16th july; 1776
Jan Feb March April May June July
31 + 29 + 31 + 30 + 31 + 30 + 16 = 198 days
= (28 weeks + 2 days) odd days
Therefore, total number of odd days = 2
Therefore, the day of the week was Tuesday

Find the angle between the minute hand and hour hand of a click when the time is
7.20?

Ans: 100deg

Sol: Angle traced by the hour hand in 12 hours = 360 degrees.
Angle traced by it in 7 hrs 20 min i.e. 22/3 hrs = [(360/12) * (22/3)] = 220 deg.
Angle traced by minute hand in 60 min = 360 deg.
Angle traced by it in 20 min = [(360/20) * 60] = 120 deg.
Therefore, required angle = (220 - 120) = 100deg.

The minute hand of a clock overtakes the hours hand at intervals of 65 min of the correct time. How much of the day does the clock gain or lose?

Ans: the clock gains 10 10/43 minutes

Sol: In a correct clock, the minute hand gains 55 min. spaces over the hour hand in 60 minutes.
To be together again, the minute hand must gain 60 minutes over the hour hand.
55 minutes are gained in 60 min.
60 min. are gained in [(60/55) * 60] min == 65 5/11 min.
But they are together after 65 min.
Therefore, gain in 65 minutes = (65 5/11 - 65) = 5/11 min.

Gain in 24 hours = [(5/11) * (60*24)/65] = 10 10/43 min.
Therefore, the clock gains 10 10/43 minutes in 24 hours.

A clock is set right at 8 a.m. The clock gains 10 minutes in 24 hours. What will be the true time when the clock indicates 1 p.m. on the following day?

Ans. 48 min. past 12.

Sol: Time from 8 a.m. on a day to 1 p.m. on the following day = 29 hours.
24 hours 10 min. of this clock = 24 hours of the correct clock.
145/6 hrs of this clock = 24 hours of the correct clock.
29 hours of this clock = [24 * (6/145) * 29] hrs of the correct clock
= 28 hrs 48 min of the correct clock.
Therefore, the correct time is 28 hrs 48 min. after 8 a.m.
This is 48 min. past 12.

At what time between 2 and 3 o' clock will the hands 0a a clock together?

Ans: 10 10/11 min. past 2.

Sol: At 2 o' clock, the hour hand is at 2 and the minute hand is at 12, i.e. they are 10 min space apart.
To be together, the minute hand must gain 10 minutes over the other hand.
Now, 55 minutes are gained by it in 60 min.
Therefore, 10 min will be gained in [(60/55) * 10] min = 10 10/11 min.
Therefore, the hands will coincide at 10 10/11 min. past 2.

A sum of money amounts to Rs.6690 after 3 years and to Rs.10035 after 6 years on compound interest. Find the sum.

Ans: Rs. 4460

Sol: Let the Sum be Rs. P. Then
P [1 + (R/100)]^3 = 6690.....(i)
P [1 + (R/100)]^6 = 10035.....(ii)
On dividing, we get [1 + (R/100)]^3 = 10035/6690 = 3/2.
P * (3/2) = 6690 or P = 4460.
Hence, the sum is Rs. 4460.

Simple interest on a certain sum is 16/25 of the sum. Find the rate percent and time, if both are numerically equal.

Ans: Rate = 8% and Time = 8 years

Sol: Let sum = X. Then S.I. = 16x/25
Let rate = R% and Time = R years.

Therefore, x * R * R/100 = 16x/25 or R^2 = 1600/25, R = 40/5 = 8
Therefore, Rate = 8% and Time = 8 years.

Find
i. S.I. on RS 68000 at 16 2/3% per annum for 9 months.
ii. S.I. on RS 6250 at 14% per annum for 146 days.
iii. S.I. on RS 3000 at 18% per annum for the period from 4th Feb 1995 to 18th April 1995.

Ans: i. RS 8500.
ii. RS 350.
iii. RS 108.

Sol:
i. P = 68000, R = 50/3% p.a. and T = 9/12 year = ¾ years
Therefore, S.I. = (P * Q * R/100)
= RS (68000 * 50/3 * ¾ * 1/100) = RS 8500.

ii. P = RS 6265, R = 14% p.a. and T = (146/365) year = 2/5 years.
Therefore, S.I. = RS (6265 * 14 * 2/5 *1/100) = RS 350.
iii. Time = (24 + 31 + 18) days = 73 days = 1/5 year

P = RS 3000 and R = 18% p.a.
Therefore, S.I. = RS (3000 * 18 * 1/5 * 1/100) = RS 108

A sum at simple interest at 13 ½% per annum amounts to RS 2502.50 after 4 years. Find the sum.

Ans: sum = RS 1625

Sol: Let sum be x. Then,
S.I. = (x * 27/2 * 4 * 1/100) = 27x/50
Therefore, amount = (x + 27x/50) = 77x/50
Therefore, 77x/50 = 2502.50 or x = 2502.50 * 50 / 77 = 1625
Hence, sum = RS 1625

A sum of money doubles itself at C.I. in 15 years. In how many years will it become eight times?

Ans.45 years.

Sol: P [1 + (R/100)]^15 = 2P è [1 + (R/100)]^15 = 2.....(i)
Let P [1 + (R/100)]^n = 8P è P [1 + (R/100)]^n = 8 = 2^3
= [{1 + (R/100)}^15]^3.
è [1 + (R/100)]^n = [1 + (R/100)]^45.
è n = 45.
Thus, the required time = 45 years.

A certain sum amounts to Rs. 7350 in 2 years and to Rs. 8575 in 3 years. Find the sum and rate percent.

Ans: Sum = Rs. 5400,Rate=16 2/3 %.

Sol: S.I. on Rs. 7350 for 1 year = Rs. (8575-7350) = Rs. 1225.
Therefore, Rate = (100*1225 / 7350*1) % = 16 2/3 %.
Let the sum be Rs. X. then, x[1 + (50/3*100)]^2 = 7350.
è x * 7/6 * 7/6 = 7350.
è x = [7350 * 36/49] = 5400.
Therefore, Sum = Rs. 5400.

A, B and C start a business each investing Rs. 20000. After 5 months A withdrew Rs. 5000, B withdrew Rs. 4000 and C invests Rs. 6000 more. At the end of the year, a total profit of Rs. 69,900 was recorded. Find the share of each.

Ans. A's share = Rs. 20,500
B's share = Rs. 21200
C's share = Rs. 28200

Sol: Ratio of the capitals of A, B and C
= (20000*5+ 15000*7) : (20000*5+16000*7): (20000*5+26000*7)
=205000: 212000 : 282000 = 205:212:282
Therefore, A's share = Rs. (69900*205/699) = Rs. 20,500
B's share = Rs. (69900*212/699) = Rs. 21200,
C's share = Rs. (69900*282/699) = Rs. 28200.

Sanjiv started a business by investing Rs. 36000. After 3 months Rajiv joined him by investing Rs. 36000. Out an annual profit of Rs. 37100, find the share of each?

Sol: Ratio of their capitals= 36000*12:36000*9 = 4:3
Sanjiv's share= Rs. (37100*4/7) = Rs. 21200.
Rajiv's share = Rs. (37100*3/7) = Rs.15900.

If 20 men can build a wall 56m long in 6 days, what length of a similar wall can be built by 35 men in 3 days?

Ans. Length=49m.

Sol: Since the length is to be found out, we compare each item with the length as shown below.
More men, more length built (Direct).
Less days, less length built (Direct).
Men 20:35 :: 56: x
Similarly, days 6:3 :: 56: x.

Therefore, 20*6*x= 35*3*56 or x= 49.
Hence, the required length= 49m.

If 9 engines consume 24 metric tonnes of coal, when each is working 8 hours a day; how much coal will be required for 8 engines, each running 13 hours a day, it being given that 3 engines of the former type consume as much as 4 engines of latter type.

Ans:26metric tonnes.

Sol: We shall compare each item with the quantity of coal.
Less engines, less coal consumed (direct)
More working hours, more coal consumed (direct)
If 3 engines of former type consume 1 unit, then 1 engine will consume 1/3 unit.
If 4 engines of latter type consume 1 unit, then 1 engine will consume 1/4 unit.
Less rate of consumption, less coal consumed (direct).
Therefore, number of engines 9:8 :: 24:x
Working hours 8:13 :: 24:x
Rate of consumption 1/3:1/4 :: 24:x.
9*8*1/3*x= 8*13*1/4*24 or x= 26.
Therefore, required consumption of coal 26 metric tonnes.

A contract is to be completed in 46 days and 117 men were set to work, each working 8 hours a day. After 33 days 4/7 of the work is completed. How many additional men may be employed so that the work may be completed in time, each man now working 9 hours a day?

Ans.81

Sol: Remaining work = 1-4/7 =3/7.
Remaining period = (46-33) days =13 days.
Less work, less men (direct)
Less days, more men (indirect).
More hours per day, less men (indirect)
Therefore, work 4/7:3/7 ::117/x
Days 13:33 :: 117/x
Hrs/day 9:8:: 117/x
Therefore, 4/7*13*9*x= 3/7*33*8*117 or x= 198.
Therefore, additional men to be employed =(198-117) =81.

A garrison of 3300 men had provisions for 32 days, when given at the rate of 850gms per head. At the end of 7 days, reinforcement arrives and it was found that the provisions will last 17 days more, when given at the rate of 825gms per head. What is the strength of the reinforcement?

Ans: 1700

Sol: The problem becomes:
3300 men taking 850gms per head have provisions for (32-7) or 25 days. How many men taking 825gms each have provisions for 17 days?
Less ration per head, more men (indirect).
Less days, more men (indirect)
Ration 825:850::3300:x
Days 17:25::3300:x
Therefore, 825*17*x= 850*25*3300 or x= 5000.
Therefore, strength of reinforcement = 5000-3300 = 1700.

Find the slant height, volume, curved surface area and the whole surface area of a cone of radius 21 cm and height 28 cm.

Sol: Slant Height, l = √(r^2 + h^2) =√(21^2 + 28^2) = √1225 = 35 cm
Volume = 1/3πr^2h = (1/3 * 22/7 * 21 * 21 * 28) cm^3 = 12936 cm^3
Curved surface area = πrl = 22/7 * 21 *35 cm^3 = 2310 cm^2
Total Surface Area = (πrl + πr^2) = (2310 + 22/7 * 21 * 21) cm^2 = 3696 cm^2

If the radius of the sphere is increased by 50%, find the increase percent in volume and the increase percent in the surface area.

Sol: Let the original radius = R. Then, new radius = 150/100 R = 3R/2
Original Volume = 4/3πR^3, New volume = 4/3π(3 R/2)^3 = 9πR^3/2
Original surface area = 4πR^2 , New surface area = 4π(3R/2)^2 = 9πR^2
Increase % in surface area = (5πR^2/4πR^2 * 100)% = 125%

If each edge of a cube is increased by 50%, find the percentage increase in its surface area.

Sol: Let the original length of each edge = a
Then, Original surface area = 6a^2
New surface area = 6 * (3a/2)^2 = 27a^2/2
Increase percent in surface area = (15/2a^2 * 1/(6a^2) * 100)% = 125%

Find the number of the bricks, each measuring 25 cm by 12.5 cm by 7.5 cm, required to build a wall 6 m long, 5 m high and 50cm thick, while the mortar occupies 5% of the volume of the wall.

Sol: Volume of the Wall = (600 * 500 * 50) cu. Cm.
Volume of the bricks = 95% of the volume of the wall.
= (95/100 * 600 * 500 * 50) cu. Cm.
Volume of 1 brick = (25 * 25/2 * 75/2) cu. Cm.
Therefore, Number of bricks = (95/100 * (600 * 500 * 50 * 2 * 10)/(25 * 25 * 75))=6080

The base of a triangular field is three times its altitude. If the cost of cultivating the field at Rs. 24.68 per hectare be Rs. 333.18, find its base and height.

Sol: Area of the field = Total cost/Rate = (333.18/24.68) hectares =13.5 hectares.
= (13.5*10000) m^2 =135000m^2.
Let altitude = x meters and base = 3x meters.
Then, ½ *3x* x= 135000 or x^2 = 9000 or x= 300.
Therefore, base =900 m & altitude = 300m.

Find the area of a rhombus one side of which measures 20cm and one diagonal 24cm.

Sol: Let, other diagonal = 2x cm,
Since halves of diagonals and one side of rhombus form a right angled triangle with side as hypotenuse, we have:
(20)^2 =(12)^2+x^2 or x=Ö(20)^2-(12)^2 =Ö256=16 cm.
Therefore, other diagonal = 32 cm.

X alone can do a piece of work in 15 days and Y alone can do it in 10 days. X and Y undertook to do it for Rs. 720. With the help of Z they finished it in 5 days. How much is paid to Z?

Sol. In one day X can finish 1/15th of the work.
In one day Y can finish 1/10th of the work.
Let us say that in one day Z can finish 1/Zth of the work.
When all the three work together in one day they can finish 1/15 + 1/10 + 1/Z = 1/5th of the work.
Therefore, 1/Z = 1/30.
Ratio of their efficiencies = 1/15: 1/10: 1/30 = 2: 3: 1.Therefore Z receives 1/6th of the total money.
According to their efficiencies money is divided as 240: 360: 120.
Hence, the share of Z = Rs. 120.

How many number of times will the digit '7' be written when listing the integers from 1 to 1000?

Sol:7 does not occur in 1000. So we have to count the number of times it appears between 1 and 999. Any number between 1 and 999 can be expressed in the form of xyz where 0 < x, y, z < 9.

1. The numbers in which 7 occurs only once. e.g 7, 17, 78, 217, 743 etc
This means that 7 is one of the digits and the remaining two digits will be any of the other 9 digits (i.e 0 to 9 with the exception of 7)

You have 1*9*9 = 81 such numbers. However, 7 could appear as the first or the second or the third digit. Therefore, there will be 3*81 = 243 numbers (1-digit, 2-digits and 3-digits) in which 7 will appear only once.

In each of these numbers, 7 is written once. Therefore, 243 times.

2. The numbers in which 7 will appear twice. e.g 772 or 377 or 747 or 77
In these numbers, one of the digits is not 7 and it can be any of the 9 digits (0 to 9 with the exception of 7). There will be 9 such numbers. However, this digit which is not 7 can appear in the first or second or the third place. So there are 3 * 9 = 27 such numbers. In each of these 27 numbers, the digit 7 is written twice. Therefore, 7 is written 54 times.

3. The number in which 7 appears thrice - 777 - 1 number. 7 is written thrice in it. Therefore, the total number of times the digit 7 is written between 1 and 999 is 243 + 54 + 3 = 300

P can give Q a start of 20 seconds in a kilometer race. P can give R a start of 200 meters in the same kilometer race. And Q can give R a start of 20 seconds in the same kilometer race. How long does P take to run the kilometer?

Solution:
P can give Q a start of 20 seconds in a kilometer race. So, if Q takes 'x' seconds to run a kilometer, then P will take x – 20 seconds to run the kilometer.

Q can give R a start of 20 seconds in a kilometer race. So, if R takes 'y' seconds to run a kilometer, then Q will take y – 20 seconds to run the kilometer.

We know Q takes x seconds to run a kilometer
Therefore, x = y – 20

Therefore, P will take x – 20 = y – 20 – 20 = y – 40 seconds to run a kilometer.

i.e. P can give R a start of 40 seconds in a kilometer race, as R takes y seconds to run a kilometer and P takes only y – 40 seconds to run the kilometer.

We also know that P can give R a start 200 meters in a km race.
This essentially means that R runs 200 meters in 40 seconds.
Therefore, R will take 200 seconds to run a km.

If R takes 200 seconds to run a km, then P will take 200 – 40 = 160 seconds to run a km.

A and B enter in to a partnership and A invests Rs. 10,000 in the partnership. At the end of 4 months he withdraws Rs.2000. At the end of another 5 months, he withdraws another Rs.3000. If B receives Rs.9600 as his share of the total profit of Rs.19,100 for the year, how much did B invest in the company?

Solution:
The total profit for the year is 19100. Of this B gets Rs.9600. Therefore, A would get (19100 – 9600) = Rs.9500.
The partners split their profits in the ratio of their investments.

Therefore, the ratio of the investments of A : B = 9500 : 9600 = 95 : 96.

A invested Rs.10000 initially for a period of 4 months. Then, he withdrew Rs.2000. Hence, his investment has reduced to Rs.8000 (for the next 5 months).
Then he withdraws another Rs.3000. Hence, his investment will stand reduced to Rs.5000 during the last three months.

So, the amount of money that he had invested in the company on a money-month basis will be = 4 * 10000 + 5 * 8000 + 3 * 5000 = 40000 + 40000 + 15000 = 95000
If A had 95000 money months invested in the company, B would have had 96,000 money months invested in the company (as the ratio of their investments is 95 : 96).

If B had 96,000 money-months invested in the company, he has essentially invested 96000/12 = Rs.8000

A 20 litre mixture of milk and water contains milk and water in the ratio 3 : 2. 10 litres of the mixture is removed and replaced with pure milk and the operation is repeated once more. At the end of the two removal and replacement, what is the ratio of milk and water in the resultant mixture?

Solution:
The 20 litre mixture contains milk and water in the ratio of 3 : 2. Therefore, there will be 12 litres of milk in the mixture and 8 litres of water in the mixture.

Step 1. When 10 litres of the mixture is removed, 6 litres of milk is removed and 4 litres of water is removed. Therefore, there will be 6 litres of milk and 4 litres of water left in the container. It is then replaced with pure milk of 10 litres. Now the container will have 16 litres of milk and 4 litres of water.

Step 2. When 10 litres of the new mixture is removed, 8 litres of milk and 2 litres of water is removed. The container will have 8 litres of milk and 2 litres of water in it. Now 10 litres of pure milk is added. Therefore, the container will have 18 litres of milk and 2 litres of water in it at the end of the second step.

Therefore, the ratio of milk and water is 18 : 2 or 9 : 1.

A zookeeper counted the heads of the animals in a zoo and found it to be 80. When he counted the legs of the animals he found it to be 260. If the zoo had either pigeons or horses, how many horses were there in the zoo?

Solution:
Let the number of horses = x
Then the number of pigeons = 80 – x.
Each pigeon has 2 legs and each horse has 4 legs.
Therefore, total number of legs = 4x + 2(80-x) = 260
=>4x + 160 – 2x = 260
=>2x = 100
=>x = 50.

A group of workers can do a piece of work in 24 days. However as 7 of them were absent it took 30 days to complete the work. How many people actually worked on the job to complete it?

Solution:
Let the original number of workers in the group be 'x'
Therefore, actual number of workers = x-7.
We know that the number of manhours required to do the job is the same in both the cases.
Therefore, x (24) = (x-7).30
24x = 30x - 210
6x = 210
x = 35.
Therfore, the actual number of workers who worked to complete the job = x - 7 = 35 -7 = 28.

The ratio of marks obtained by vinod and Basu is 6:5. If the combined average of their percentage is 68.75 and their sum of the marks is 275, find the total marks for which exam was conducted.

Solution:
Let Vinod marks be 6x and Basu's is 5x. Therefore, the sum of the marks = 6x + 5x = 11x.
But the sum of the marks is given as 275 = 11x. We get x = 25 therefore, vinod marks is 6x = 150 and Basu marks = 5x = 125.
Therefore, the combined average of their marks = (150 + 125) / 2 = 137.5.
If the total mark of the exam is 100 then their combined average of their percentage is 68.75
Therefore, if their combined average of their percentage is 137.5 then the total marks would be (137.5 / 68.75)*100 = 200.

If the cost price of 20 articles is equal to the selling price of 16 articles, What is the percentage of profit or loss that the merchant makes?

Solution:
Let Cost price of 1 article be Re.1.
Therefore, Cost price of 20 articles = Rs. 20.
Selling price of 16 articles = Rs. 20
Therefore, Selling price of 20 articles = (20/16) * 20 = 25
Profit = Selling price - Cost price
= 25 - 20 = 5
Percentage of profit = Profit / Cost price * 100.
= 5 / 20 * 100 = 25% Profit

A candidate who gets 20% marks fails by 10 marks but another candidate who gets 42% marks gets 12% more than the passing marks. Find the maximum marks.

Solution:
Let the maximum marks be x.
From the given statement pass percentage is 42% - 12% = 30%
By hypothesis, 30% of x – 20% of x = 10 (marks)
i.e., 10% of x = 10
Therefore, x = 100 marks.

When processing flower-nectar into honeybees' extract, a considerable amount of water gets reduced. How much flower-nectar must be processed to yield 1kg of honey, if nectar contains 50% water, and the honey obtained from this nectar contains 15% water?

Solution:
Flower-nectar contains 50% of non-water part.
In honey this non-water part constitutes 85% (100-15).
Therefore 0.5 X Amount of flower-nectar = 0.85 X Amount of honey = 0.85 X 1 kg
Therefore amount of flower-nectar needed = (0.85/0.5) * 1kg = 1.7 kg.

A man can row 50 km upstream and 72 km downstream in 9 hours. He can also row 70 km upstream and 90 km downstream in 12 hours. Find the rate of current.

Solution:
Let x and y be the upstream and downstream speed respectively.
Hence 50/x + 72/y = 9 and 70/x + 90/y = 12
Solving for x and y we get x = 10 km/hr and y = 18 km/hr
We know that Speed of the stream = 1/2 * (downstream speed - upstream speed) = 1/2 (18 – 10) = 4 km/hr.

How long will it take for a sum of money to grow from Rs.1250 to Rs.10,000, if it is invested at 12.5% p.a simple interest?

Solution:
Simple interest is given by the formula SI = (pnr/100), where p is the principal, n is the number of years for which it is invested, r is the rate of interest per annum
In this case, Rs. 1250 has become Rs.10,000.
Therefore, the interest earned = 10,000 – 1250 = 8750.
8750 = [(1250*n*12.5)/100]
=> n = 700 / 12.5 = 56 years.

The time in a clock is 20 minute past 2. Find the angle between the hands of the clock.

Solution:
Time is 2:20. Position of the hands: Hour hand at 2 (nearly).
Minute hand at 4

Angle between 2 and 4 is 60 degrees [(360/12) * (4-2)]
Angle made by the hour hand in 20 minutes is 10 degrees, since it turns through ½ degrees in a minute.
Therefore, angle between the hands is 60 degrees - 10 degrees = 50 degrees

A man buys an article for Rs. 27.50 and sells it for Rs. 28.60. Find his gain percent.

Solution:
C.P. = Rs.27.50, S.P. = Rs. 28.60.
Therefore Gain = Rs. (28.60 – 27.50) = Rs.1.10.
Therefore Gain % = (1.10*100/27.50) % = 4%.

Find S.P., when:
(i) C.P. = Rs. 56.25, gain = 20%.
(ii) C.P. = Rs. 80.40, loss = 15%.

Solution:

(i) S.P. = 120% of Rs. 56.25 = Rs. (120*56.25/100) = Rs. 67.50.
(ii) S.P. = 85% of Rs. 80.40 = Rs. (85*80.40/100) = Rs. 68.34.

A scooterist covers a certain distance at 36 kmph. How many meters does he cover in 2min?

Solution:
Speed = 36 kmph = 36 * 5/18 = 10mps
Therefore, Distance covered in 2 min = (10 * 2 * 60)m = 1200m

How often between 11 O'clock and 12 O'clock are the hands of the clock together at an integral number value?

Solution:
At 11 O'clock, the hour hand is 5 spaces apart from the minute hand.
During the next 60 minutes, i.e. between 11' O clock and 12' O clock the hour hand will move five spaces [integral values as denoted by the 56 minute, 57 minute, 58 minute, 59 minute and 60 minute positions].
For each of these 5 positions, the minute hand will be at the 12th minute, 24th minute, 36th minute, 48th minute and 60th minute positions.
Hence the difference between the positions of the hour hand and the minute hand will have an integral number of minutes between them.

i.e. 5 positions.

Given that on 27th February 2003 is Thursday. What was the day on 27th February 1603?

Solution:
After every 400 years, the same day occurs.
Thus, if 27th February 2003 is Thursday, before 400 years i.e., on 27th February 1603 has to be Thursday.

It was calculated that 75 men could complete a piece of work in 20 days. When work was scheduled to commence, it was found necessary to send 25 men to another project. How much longer will it take to complete the work?

Answer:
30 days.

Explanation:
Before:
One day work = 1 / 20
One man's one day work = 1 / (20 * 75)
Now:
No. Of workers = 50
One day work = 50 * 1 / (20 * 75)

The total no. of days required to complete the work = (75 * 20) / 50 = 30

A student divided a number by 2/3 when he required to multiply by 3/2. Calculate the percentage of error in his result.

Answer:
0 %

Explanation:
Since 3x / 2 = x / (2 / 3)

A dishonest shopkeeper professes to sell pulses at the cost price, but he uses a false weight of 950gm. for a kg. His gain is ...%.

Answer:
5.3 %

Explanation:
He sells 950 grams of pulses and gains 50 grams.
If he sells 100 grams of pulses then he will gain (50 / 950) *100 = 5.26

A software engineer has the capability of thinking 100 lines of code in five minutes and can type 100 lines of code in 10 minutes. He takes a break for five minutes after every ten minutes. How many lines of codes will he complete typing after an hour?

Answer:
250 lines of codes

A man was engaged on a job for 30 days on the condition that he would get a wage of Rs. 10 for the day he works, but he have to pay a fine of Rs. 2 for each day of his absence. If he gets Rs. 216 at the end, he was absent for work for … days.

Answer:
7 days

Explanation:
The equation portraying the given problem is:
10 * x – 2 * (30 – x) = 216 where x is the number of working days.
Solving this we get x = 23
Number of days he was absent was 7 (30-23) days.

A contractor agreeing to finish a work in 150 days, employed 75 men each working 8 hours daily. After 90 days, only 2/7 of the work was completed. Increasing the number of men by_____ each working now for 10 hours daily, the work can be completed in time.

Answer:
150 men.

Explanation:
One day's work = 2 / (7 * 90)
One hour's work = 2 / (7 * 90 * 8)
One man's work = 2 / (7 * 90 * 8 * 75)

The remaining work (5/7) has to be completed within 60 days, because the total number of days allotted for the project is 150 days.

So we get the equation

(2 * 10 * x * 60) / (7 * 90 * 8 * 75) = 5/7 where x is the number of men working after the 90th day.

We get x = 225

Since we have 75 men already, it is enough to add only 150 men.

what is a percent of b divided by b percent of a?
(a) a (b) b (c) 1 (d) 10 (e) 100

Answer:
(c) 1

Explanation:
a percent of b : (a/100) * b
b percent of a : (b/100) * a

a percent of b divided by b percent of a : ((a / 100)*b) / (b/100) * a)) = 1

A man bought a horse and a cart. If he sold the horse at 10 % loss and the cart at 20 % gain, he would not lose anything; but if he sold the horse at 5% loss and the cart at 5% gain, he would lose Rs. 10 in the bargain. The amount paid by him was Rs._____ for the horse and Rs._____ for the cart.

Answer:
Cost price of horse = Rs. 400 & the cost price of cart = 200.

Explanation:-
Let x be the cost price of the horse and y be the cost price of the cart.
In the first sale there is no loss or profit. (i.e.) The loss obtained is equal to the gain.

Therefore (10/100) * x = (20/100) * y

X = 2 * y ----------(1)

In the second sale, he lost Rs. 10. (i.e.) The loss is greater than the profit by Rs. 10.

Therefore (5 / 100) * x = (5 / 100) * y + 10 -------(2)

Substituting (1) in (2) we get

(10 / 100) * y = (5 / 100) * y + 10

(5 / 100) * y = 10

y = 200

From (1) 2 * 200 = x = 400

A tennis marker is trying to put together a team of four players for a tennis tournament out of seven available. males - a, b and c; females – m, n, o and p. All players are of equal ability and there must be at least two males in the team. For a team of four, all players must be able to play with each other under the following restrictions:

b should not play with m,
c should not play with p, and
a should not play with o.

Which of the following statements must be false?
1. b and p cannot be selected together
2. c and o cannot be selected together
3. c and n cannot be selected together.

Answer:
3.

Explanation:
Since inclusion of any male player will reject a female from the team. Since there should be four member in the team and only three males are available, the girl, n should included in the team always irrespective of others selection.

Five farmers have 7, 9, 11, 13 & 14 apple trees, respectively in their orchards. Last year, each of them discovered that every tree in their own orchard bore exactly the same number of apples. Further, if the third farmer gives one apple to the first, and the fifth gives three to each of the second and the fourth, they would all have exactly the same number of apples. What were the yields per tree in the orchards of the third and fourth farmers?

Answer:
11 & 9 apples per tree.

Explanation:
Let a, b, c, d & e be the total number of apples bored per year in A, B, C, D & E 's orchard. Given that $a + 1 = b + 3 = c - 1 = d + 3 = e - 6$

But the question is to find the number of apples bored per tree in C and D 's orchard. If is enough to consider $c - 1 = d + 3$.

Since the number of trees in C's orchard is 11 and that of D's orchard is 13. Let x and y be the number of apples bored per tree in C & d 's orchard respectively.

Therefore $11x - 1 = 13y + 3$

By trial and error method, we get the value for x and y as 11 and 9

Five boys were climbing a hill. J was following H. R was just ahead of G. K was between G & H. They were climbing up in a column. Who was the second?

Answer:
G.

Explanation:
The order in which they are climbing is R – G – K – H – J

John is undecided which of the four novels to buy. He is considering a spy thriller, a Murder mystery, a Gothic romance and a science fiction novel. The books are written by Rothko, Gorky, Burchfield and Hopper, not necessary in that order, and published by Heron, Piegon, Blueja and sparrow, not necessary in that order.

(1) The book by Rothko is published by Sparrow.
(2) The Spy thriller is published by Heron.
(3) The science fiction novel is by Burchfield and is not published by Blueja.
(4)The Gothic romance is by Hopper.

Pigeon publishes _____.

The novel by Gorky _____.

John purchases books by the authors whose names come first and third in alphabetical order. He does not buy the books _____.

On the basis of the first paragraph and statement (2), (3) and (4) only, it is possible to deduce that
1. Rothko wrote the murder mystery or the spy thriller
2. Sparrow published the murder mystery or the spy thriller
3. The book by Burchfield is published by Sparrow.

Answer:

Novel Name	Author	Publisher
Spy thriller	Rathko	Heron
Murder mystery	Gorky	Piegon
Gothic romance	Burchfield	Blueja
Science fiction	Hopper	Sparrow

Explanation:

Since Blueja doesn't publish the novel by Burchfield and Heron publishes the novel spy thriller, Piegon publishes the novel by Burchfield.

Since Hopper writes Gothic romance and Heron publishes the novel spy thriller, Blueja publishes the novel by Hopper.

Since Heron publishes the novel spy thriller and Heron publishes the novel by Gorky, Gorky writes Spy thriller and Rathko writes Murder mystery.

If a light flashes every 6 seconds, how many times will it flash in ¾ of an hour?

Answer:
451 times.

Explanation:
There are 60 minutes in an hour.
In ¾ of an hour there are (60 * ¾) minutes = 45 minutes.
In ¾ of an hour there are (60 * 45) seconds = 2700 seconds.
Light flashed for every 6 seconds.
In 2700 seconds 2700/6 = 450 times.
The count start after the first flash, the light will flashes 451 times in ¾ of an hour.

If point P is on line segment AB, then which of the following is always true?
(1) AP = PB (2) AP > PB (3) PB > AP (4) AB > AP (5) AB > AP + PB

Answer:
(4)

Explanation:
Since p is a point on the line segment AB, AB > AP

All men are vertebrates. Some mammals are vertebrates. Which of the following conclusions drawn from the above statement is correct.

All men are mammals
All mammals are men
Some vertebrates are mammals.
None

Answer: (c)

Which of the following statements drawn from the given statements are correct?

Given:
All watches sold in that shop are of high standard. Some of the HMT watches are sold in that shop.
a) All watches of high standard were manufactured by HMT.
b) Some of the HMT watches are of high standard.
c) None of the HMT watches is of high standard.
d) Some of the HMT watches of high standard are sold in that shop.

Answer: (b) & (d)

If every alternative letter starting from B of the English alphabet is written in small letter, rest all are written in capital letters, how the month " September" be written.

(1) SeptEMbEr (2) SEpTeMBEr (3) SeptembeR
(4) SepteMber (5) None of the above.

Answer:
(5).

Explanation:
Since every alternative letter starting from B of the English alphabet is written in small letter, the letters written in small letter are b, d, f...

In the first two answers the letter E is written in both small & capital letters, so they are not the correct answers. But in third and fourth answers the letter is written in small letter instead capital letter, so they are not the answers.

The length of the side of a square is represented by x+2. The length of the side of an equilateral triangle is 2x. If the square and the equilateral triangle have equal perimeter, then the value of x is _____.

Answer:
x = 4

Explanation:
Since the side of the square is x + 2, its perimeter = 4 (x + 2) = 4x + 8
Since the side of the equilateral triangle is 2x, its perimeter = 3 * 2x = 6x
Also, the perimeters of both are equal.
(i.e.) 4x + 8 = 6x
(i.e.) 2x = 8 è x = 4.

It takes Mr. Karthik y hours to complete typing a manuscript. After 2 hours, he was called away. What fractional part of the assignment was left incomplete?

Answer:
(y – 2) / y.

Explanation:
To type a manuscript karthik took y hours.
Therefore his speed in typing = 1/y.
He was called away after 2 hours of typing.
Therefore the work completed = 1/y * 2.
Therefore the remaining work to be completed = 1 – 2/y.
(i.e.) work to be completed = (y-2)/y

Which of the following is larger than 3/5?
(1) ½ (2) 39/50 (3) 7/25 (4) 3/10 (5) 59/100

Answer:
(2)

The number that does not have a reciprocal is _____.

Answer:
1

Explanation:
One is the only number exists without reciprocal because the reciprocal of one is one itself.

There are 3 persons Sudhir, Arvind, and Gauri. Sudhir lent cars to Arvind and Gauri as many as they had already. After some time Arvind gave as many cars to Sudhir and Gauri as many as they have. After sometime Gauri did the same thing. At the end of this transaction each one of them had 24. Find the cars each originally had.

Answer:
Sudhir had 39 cars, Arvind had 21 cars and Gauri had 12 cars.

A man bought a horse and a cart. If he sold the horse at 10 % loss and the cart at 20 % gain, he would not lose anything; but if he sold the horse at 5% loss and the cart at 5% gain, he would lose Rs. 10 in the bargain. The amount paid by him was Rs._____ for the horse and Rs._____ for the cart.

Answer:
Cost price of horse: Rs. 400 &
Cost price of cart: Rs. 200

Explanation:
Let x be the cost of horse & y be the cost of the cart.
10 % of loss in selling horse = 20 % of gain in selling the cart
Therefore (10 / 100) * x = (20 * 100) * y
è x = 2y ----------(1)
5 % of loss in selling the horse is 10 more than the 5 % gain in selling the cart.
Therefore (5 / 100) * x - 10 = (5 / 100) * y

è 5x - 1000 = 5y

Substituting (1)

10y - 1000 = 5y

5y = 1000

y = 200

x = 400 from (1)

For the following, find the next term in the series

6, 24, 60,120, 210 ?

a) 336 b) 366 c) 330 d) 660

Answer :
a) 336

Explanation : The series is 1.2.3, 2.3.4, 3.4.5, 4.5.6, 5.6.7, ... ('.' means product)

1, 5, 13, 25 ?

Answer :
41

Explanation : The series is of the form 0^2+1^2, 1^2+2^2,...

0, 5, 8, 17 ?

Answer :
24

Explanation : 1^2-1, 2^2+1, 3^2-1, 4^2+1, 5^2-1

1, 8, 9, 64, 25 ? (Hint : Every successive terms are related)

Answer :
216

Explanation : 1^2, 2^3, 3^2, 4^3, 5^2, 6^3

8,24,12,36,18,54 ?

Answer :
27

71,76,69,74,67,72 ?

Answer :
67

5,9,16,29,54 ?

Answer :
103

Explanation : 5*2-1=9; 9*2-2=16; 16*2-3=29; 29*2-4=54; 54*2-5=103

1,2,4,10,16,40,64 ?(Successive terms are related)

Answer :
200

Explanation : The series is powers of 2 (2^0,2^1,..).
All digits are less than 8. Every second number is in octal number system.
128 should follow 64. 128 base 10 = 200 base 8.

Find the odd man out.

3,5,7,12,13,17,19

Answer :
12

Explanation : All but 12 are odd numbers

2,5,10,17,26,37,50,64

Answer :
64

Explanation : 2+3=5; 5+5=10; 10+7=17; 17+9=26; 26+11=37; 37+13=50; 50+15=65;

105,85,60,30,0,-45,-90

Answer :
0

Explanation : 105-20=85; 85-25=60; 60-30=30; 30-35=-5; -5-40=-45; -45-45=-90;

What is the number of zeros at the end of the product of the numbers from 1 to 100?

Answer :
127

A fast typist can type some matter in 2 hours and a slow typist can type the same in 3 hours. If both type combinely, in how much time will they finish?

Answer :

1 hr 12 min

Explanation : The fast typist's work done in 1 hr = 1/2
The slow typist's work done in 1 hr = 1/3
If they work combinely, work done in 1 hr = 1/2+1/3 = 5/6
So, the work will be completed in 6/5 hours. i.e., 1+1/5 hours = 1hr 12 min

Gavaskar's average in his first 50 innings was 50. After the 51st innings, his average was 51. How many runs did he score in his 51st innings. (supposing that he lost his wicket in his 51st innings)

Answer :
101

Explanation : Total score after 50 innings = 50*50 = 2500
Total score after 51 innings = 51*51 = 2601
So, runs made in the 51st innings = 2601-2500 = 101
If he had not lost his wicket in his 51st innings, he would have scored an unbeaten 50 in his 51st innings.

Out of 80 coins, one is counterfeit. What is the minimum number of weighings needed to find out the counterfeit coin?

Answer : 4

What can you conclude from the statement : All green are blue, all blue are red. ?
(i) some blue are green
(ii) some red are green
(iii) some green are not red
(iv) all red are blue

(a) i or ii but not both
(b) i & ii only
(c) iii or iv but not both
(d) iii & iv

Answer :
(b)

A rectangular plate with length 8 inches, breadth 11 inches and thickness 2 inches is available. What is the length of the circular rod with diameter 8 inches and equal to the volume of the rectangular plate?

Answer :
3.5 inches

Explanation : Volume of the circular rod (cylinder) = Volume of the rectangular plate

(22/7)*4*4*h = 8*11*2
h = 7/2 = 3.5

What is the sum of all numbers between 100 and 1000 which are divisible by 14 ?

Answer :
35392

Explanation : The number closest to 100 which is greater than 100 and divisible by 14 is 112, which is the first term of the series which has to be summed.

The number closest to 1000 which is less than 1000 and divisible by 14 is 994, which is the last term of the series.

112 + 126 + ... + 994 = 14(8+9+ ... + 71) = 35392

If s(a) denotes square root of a, find the value of s(12+s(12+s(12+ ..... upto infinity.

Answer :
4

Explanation : Let x = s(12+s(12+s(12+.....

We can write x = s(12+x). i.e., x^2 = 12 + x. Solving this quadratic equation, we get x = -3 or x=4. Sum cannot be -ve and hence sum = 4.

A cylindrical container has a radius of eight inches with a height of three inches. Compute how many inches should be added to either the radius or height to give the same increase in volume?

Answer :
16/3 inches

Explanation : Let x be the amount of increase. The volume will increase by the same amount if the radius increased or the height is increased.

So, the effect on increasing height is equal to the effect on increasing the radius.

i.e., (22/7)*8*8*(3+x) = (22/7)*(8+x)*(8+x)*3

Solving the quadratic equation we get the x = 0 or 16/3. The possible increase would be by 16/3 inches.

With just six weights and a balance scale, you can weigh any unit number of kgs from 1 to 364. What could be the six weights?

Answer :
1, 3, 9, 27, 81, 243 (All powers of 3)

Diophantus passed one sixth of his life in childhood, one twelfth in youth, and one seventh more as a bachelor; five years after his marriage a son was born who died four years before his father at half his final age. How old is Diophantus?

Answer :
84 years

Explanation : x/6 + x/12 + x/7 + 5 + x/2 + 4 = x

If time at this moment is 9 P.M., what will be the time 23999999992 hours later?

Answer :
1 P.M.

Explanation : 24 billion hours later, it would be 9 P.M. and 8 hours before that it would be 1 P.M.

How big will an angle of one and a half degree look through a glass that magnifies things three times?

Answer :
1 1/2 degrees

Explanation : The magnifying glass cannot increase the magnitude of an angle.

Divide 45 into four parts such that when 2 is added to the first part, 2 is subtracted from the second part, 2 is multiplied by the third part and the fourth part is divided by two, all result in the same number.

Answer:
8, 12, 5, 20

Explanation: a + b + c + d =45; a+2 = b-2 = 2c = d/2; a=b-4; c = (b-2)/2; d = 2(b-2); b-4 + b + (b-2)/2 + 2(b-2) = 45;

I drove 60 km at 30 kmph and then an additional 60 km at 50 kmph. Compute my average speed over my 120 km.

Answer :
37 1/2

Explanation : Time reqd for the first 60 km = 120 min.; Time reqd for the second 60 km =

72 min.; Total time reqd = 192 min

Avg speed = (60*120)/192 = 37 1/2

Five executives of European Corporation hold a Conference in Rome

Mr. A converses in Spanish & Italian
Mr. B, a spaniard, knows English also
Mr. C knows English and belongs to Italy
Mr. D converses in French and Spanish
Mr. E , a native of Italy knows French

Which of the following can act as interpreter if Mr. C & Mr. D wish to converse
a) only Mr. A b) Only Mr. B c) Mr. A & Mr. B d) Any of the other three

Answer :
d) Any of the other three.

Explanation : From the data given, we can infer the following.
A knows Spanish, Italian
B knows Spanish, English
C knows Italian, English
D knows Spanish, French
E knows Italian, French

To act as an interpreter between C and D, a person has to know one of the combinations Italian&Spanish, Italian&French, English&Spanish, English&French

A, B, and E know atleast one of the combinations.

If a 6th executive is brought in, to be understood by maximum number of original five he should be fluent in

a) English & French b) Italian & Spanish c) English & French d) French & Italian

Answer :
b) Italian & Spanish

Explanation : No of executives who know

i) English is 2
ii) Spanish is 3
iii) Italian is 3
iv) French is 2

Italian & Spanish are spoken by the maximum no of executives. So, if the 6th executive

is fluent in Italian & Spanish, he can communicate with all the original five because everybody knows either Spanish or Italian.

What is the sum of the first 25 natural odd numbers?

Answer :
625

Explanation : The sum of the first n natural odd nos is square(n).

1+3 = 4 = square(2) 1+3+5 = 9 = square(3)

If Log2 x - 5 Log x + 6 = 0, then what would the value / values of x be?

Ans. x = e2 or e3.

(1/10)18 - (1/10)20 = ?

(a) 99/1020
(b) 99/10
(c) 0.9
(d) none of these

Ans. (a)

The average age of 10 members of a committee is the same as it was 4 years ago, because an old member has been replaced by a young member. Find how much younger is the new member ?

Ans.40 years.

Thirty men take 20 days to complete a job working 9 hours a day. How many hour a day should 40 men work to complete the job?

(a) 8 hrs
(b) 7 1/2 hrs
(c) 7 hrs
(d) 9 hrs

Ans. (b)

Find the smallest number in a GP whose sum is 38 and product 1728

(a) 12
(b) 20
(c) 8
(d) none of these

Ans. (c)

If 2x-y=4 then 6x-3y=?

(a)15
(b)12
(c)18
(d)10

Ans. (b)

Mr. Shah decided to walk down the escalator of a tube station. He found that if he walks down 26 steps, he requires 30 seconds to reach the bottom. However, if he steps down 34 stairs he would only require 18 seconds to get to the bottom. If the time is measured from the moment the top step begins to descend to the time he steps off the last step at the bottom, find out the height of the stair way in steps?

Ans.46 steps.

ABCE is an isosceles trapezoid and ACDE is a rectangle. AB = 10 and EC = 20. What is the length of AE?

Ans. AE = 10.

Can you tender a one rupee note in such a manner that there shall be total 50 coins but none of them would be 2 paise coins.?

Ans. 45 one paisa coins, 2 five paise coins, 2 ten paise coins, and 1 twenty-five paise coins.

If x=y=2z and xyz=256 then what is the value of x?

(a)12
(b)8
(c)16
(d)6

Ans. (b)

Pipe A can fill in 20 minutes and Pipe B in 30 mins and Pipe C can empty the same in 40 mins.If all of them work together, find the time taken to fill the tank

(a) 17 1/7 mins
(b) 20 mins
(c) 8 mins

(d) none of these

Ans. (a)

In the given figure, PA and PB are tangents to the circle at A and B respectively and the chord BC is parallel to tangent PA. If AC = 6 cm, and length of the tangent AP is 9 cm, then what is the length of the chord BC?

Ans. BC = 4 cm.

Three cards are drawn at random from an ordinary pack of cards. Find the probability that they will consist of a king, a queen and an ace.

Ans. 64/2210.

A boat travels 20 kms upstream in 6 hrs and 18 kms downstream in 4 hrs.Find the speed of the boat in still water and the speed of the water current?

(a) 1/2 kmph
(b) 7/12 kmph
(c) 5 kmph
(d) none of these

Ans. (b)

A goat is tied to one corner of a square plot of side 12m by a rope 7m long.Find the area it can graze?

(a) 38.5 sq.m
(b) 155 sq.m
(c) 144 sq.m
(d) 19.25 sq.m

Ans. (a)

A number of cats got together and decided to kill between them 999919 mice. Every cat killed an equal number of mice. Each cat killed more mice than there were cats. How many cats do you think there were ?

Ans. 991.

The square of a two digit number is divided by half the number. After 36 is added to the quotient, this sum is then divided by 2. The digits of the resulting number are the same as those in the original number, but they are in reverse order. The ten's place of the original number is equal to twice the difference between its digits. What is the number?

Ans. 46

Here are three answers: Answer A Answer A or B Answer B or C There is only one correct answer to this question. Which answer is this?

If answer A would be correct, then answer B ("Answer A or B") would also be correct. If answer B would be correct, then answer C ("Answer B or C") would also be correct. This leads to the conclusion that if either answer A or answer B would be the correct answer, there are at least two correct answers. This contradicts with the statement that "there is only one correct answer to this question". If answer C would be correct, then there are no contradictions. So the solution is: answer C.

Hans is standing behind Gerrie and at the same time Gerrie is standing behind Hans. How is this possible

Hans and Gerrie are standing with their backs towards each other!

A cyclist drove one kilometer, with the wind in his back, in three minutes and drove the same way back, against the wind in four minutes. If we assume that the cyclist always puts constant force on the pedals, how much time would it take him to drive one kilometer without wind?

The cyclist drives one kilometer in three minutes with the wind in his back, so in four minutes he drives 1 1/3 kilometer. Against the wind, he drives 1 kilometer in four minutes. If the wind helps the cyclist during four minutes and hinders the cyclist during another four minutes, then - in these eight minutes - the cyclist drives 2 1/3 kilometers. Without wind, he would also drive 2 1/3 kilometers in eight minutes and his average speed would then be 17.5 kilometers per hour. So it will take him 3 3/7 minutes to drive one kilometer.

Three salesmen went into a hotel to rent a room. The manager stated that he had only one room left, but all three could use it for $30.00 for the night. The three salesmen gave him $10.00 each and went up to their room. Later, the manager decided that he had charged the salesmen too much so he called the bellhop over, gave him five one-dollar bills, and said: 'Take this $5.00 up to the salesmen and tell them I had charged them too much for the room'. On the way up, the bellhop knew that he could not divide the five one-dollar bills equally so he put two of the one-dollar bills in his pocket and returned one one-dollar bill to each of the salesmen. This means that each salesman paid $9.00 for the room. The bellhop kept $2.00. Three times nine is 27 plus two is 29……. What happened to the extra dollar?

The calculation just makes no sense. The three salesman paid $27, of which the manager got $25 and the bellhop $2. Conclusion: There's no dollar missing at all.

A cyclist drove one kilometer, with the wind in his back, in three minutes and drove the same way back, against the wind in four minutes. If we assume that the cyclist always puts constant force on the pedals, how much time would it take him to drive one kilometer without wind?

The cyclist drives one kilometer in three minutes with the wind in his back, so in four minutes he drives 1 1/3 kilometer. Against the wind, he drives 1 kilometer in four minutes. If the wind helps the cyclist during four minutes and hinders the cyclist during another four minutes, then - in these eight minutes - the cyclist drives 2 1/3 kilometers. Without wind, he would also drive 2 1/3 kilometers in eight minutes and his average speed would then be 17.5 kilometers per hour. So it will take him 3 3/7 minutes to drive one kilometer.

Below is an equation that isn't correct yet. By adding a number of plus signs and minus signs between the ciphers on the left side (without changes the order of the ciphers), the equation can be made correct. 123456789 = 100 How many different ways are there to make the equation correct?

There are 11 different ways:
123+45-67+8-9=100
123+4-5+67-89=100
123-45-67+89=100
123-4-5-6-7+8-9=100
12+3+4+5-6-7+89=100
12+3-4+5+67+8+9=100
12-3-4+5-6+7+89=100
1+23-4+56+7+8+9=100
1+23-4+5+6+78-9=100
1+2+34-5+67-8+9=100
1+2+3-4+5+6+78+9=100
Remark: if it is not only allowed to put plus signs and minus signs between the ciphers, but also in front of the first 1, then there is a twelfth possibility:
-1+2-3+4+5+6+78+9=100.

Tom has three boxes with fruits in his barn: one box with apples, one box with pears, and one box with both apples and pears. The boxes have labels that describe the contents, but none of these labels is on the right box. How can Tom, by taking only one piece of fruit from one box, determine what each of the boxes contains?

Tom takes a piece of fruit from the box with the labels 'Apples and Pears'. If it is an apple, then the label 'Apples' belong to this box. The box that said 'Apples', then of course shouldn't be labeled 'Apples and Pears', because that would mean that the box with 'Pears' would have been labeled correctly, and this is contradictory to the fact that none of the labels was correct. On the box with the label 'Appels' should be the label 'Pears'. If Tom would have taken a pear, the reasoning would have been in a similar way.

Richard is a strange liar. He lies on six days of the week, but on the seventh day he always tells the truth. He made the following statements on three successive days: Day 1: "I lie on Monday and Tuesday." Day 2: "Today, it's Thursday, Saturday, or Sunday." Day 3: "I lie on Wednesday and Friday." On which day does Richard tell the truth?

We know that Richard tells the truth on only a single day of the week. If the statement on day 1 is untrue, this means that he tells the truth on Monday or Tuesday. If the statement on day 3 is untrue, this means that he tells the truth on Wednesday or Friday. Since Richard tells the truth on only one day, these statements cannot both be untrue. So, exactly one of these statements must be true, and the statement on day 2 must be untrue. Assume that the statement on day 1 is true. Then the statement on day 3 must be untrue, from which follows that Richard tells the truth on Wednesday or Friday. So, day 1 is a Wednesday or a Friday. Therefore, day 2 is a Thursday or a Saturday. However, this would imply that the statement on day 2 is true, which is impossible. From this we can conclude that the statement on day 1 must be untrue. This means that Richard told the truth on day 3 and that this day is a Monday or a Tuesday. So day 2 is a Sunday or a Monday. Because the statement on day 2 must be untrue, we can conclude that day 2 is a Monday. So day 3 is a Tuesday. Therefore, the day on which Richard tells the truth is Tuesday.

Assume that you have a number of long fuses, of which you only know that they burn for exactly one hour after you lighted them at one end. However, you don't know whether theyburn with constant speed, so the first half of the fuse can be burnt in only ten minutes while the rest takes the other fifty minutes to burn completely. Also assume that you have a lighter. How can you measure exactly three quarters of an hour with these fuses? Hint: 2fuses are sufficient to measure three quarter of an hour Hint: A fuse can be lighted from both ends at the same time(which reduces its burning time significantly)

With only two fuses that burn exactly one hour, one can measure three quarters of an hour accurately, by lighting the first fuse at both ends and the other fuse at one end simultaneously. When the first fuse is burnt out after exactly half an hour (!) you know that the second fuse still has exactly half an hour to go before it will be burnt completely, but we won't wait for that. We will now also light the other end of the second fuse. This means that the second fuse will now be burnt completely after another quarter of an hour, which adds up to exactly three quarters of an hour since we started lighting the first fuse!

The numbers 1, 2, 3, 4, 5, 6, 7, 8, and 9 must be put in the depicted triangle, in such a way that the sums of the numbers on each side are equal. How should the numbers be arranged in the triangle?

There are 18 solutions to this problem, when you leave out all rotations and mirror solutions. They are all listed below: 1
5 7
9 6

2 4 8 3
1
5 8
9 3
4 2 6 7
1
6 9
8 4
2 5 7 3
1
6 9
8 2
4 3 5 7
1
6 7
8 3
5 2 4 9
2
4 7
9 3
5 1 6 8
2
5 6
9 4
3 1 8 7
2
6 9
7 1
5 3 4 8
2
6 9
8 1
3 4 5 7
3
2 6
9 4
7 1 5 8
3
4 9
8 1
5 2 6 7

3
4 7
8 2
6 1 5 9
3
5 9
6 1
7 2 4 8
3
5 8
7 1
6 2 4 9
4
2 7
9 3
5 1 8 6
4
3 9
8 1
5 2 7 6
7
2 4
6 3
8 1 5 9
7
3 6
5 1
8 2 4 9.

A banana plantation is located next to a desert. The plantation owner has 3000 bananas that he wants to transport to the market by camel, across a 1000 kilometre stretch of desert. The owner has only one camel, which carries a maximum of 1000 bananas at any moment in time, and eats one banana every kilometre it travels. What is the largest number of bananas that can be delivered at the market?

The Solution: 533 1/3 bananas.

Explanation: Since there are 3000 bananas and the camel can carry at most 1000 bananas, at least five trips are needed to carry away all bananas from the plantation P (three trips away from the plantation and two return trips):
P (plantation)
===forth===>

<===back====
===forth===>
<===back====
===forth===>
A
Point A in the abouve picture cannot be the market. This is because the camel can never travel more than 500 kilometres into the desert if it should return to the plantation (the camel eats a banana every kilometre it travels!). So point A lies somewhere in the desert between the plantation and the market. From point A to the next point, less than five trips must be used to transport the bananas to that next point. We arrive at the following global solution to the problem (P denotes the plantation, M denotes the market):

P (plantation)
===forth===>
<===back====
===forth===>
<===back====
===forth===>
A
===forth===>
<===back====
===forth===>
B
===forth===>
M (market)

Note that section PA must be in the solution (as explained above), but section AB or section BM might have a length of 0. Let us now look at the costs of each part of the route. One kilometre on section PA costs 5 bananas. One kilometre on section AB costs 3 bananas. One kilometre on section BM costs 1 banana. To save bananas, we should make sure that the length of PA is less than the length of AB and that the length of AB is less than the length of BM. Since PA is greater than 0, we conclude that AB is greater than 0 and that BM is greater than 0.

The camel can carry away at most 2000 bananas from point A. This means the distance between P and A must be chosen such that exactly 2000 bananas arrive in point A. When PA would be chosen smaller, more than 2000 bananas would arrive in A, but the surplus can't be transported further. When PA would be chosen larger, we are losing more bananas to the camel than necessary. Now we can calculate the length of PA: 3000-5*PA=2000, so PA=200 kilometres. Note that this distance is less than 500 kilometres, so the camel can travel back from A to P.

The situation in point B is similar to that in point A. The camel can't transport more than 1000 bananas from point B to the market M. Therefore, the distance between A and B must be chosen such that exactly 1000 bananas arrive in point B. Now we can calculate the length of AB: 2000-3*AB=1000, so AB=333 1/3. Note that this distance is less than

500 kilometres, so the camel can travel back from B to A. It follows that BM=1000-200-333 1/3=466 2/3 kilometres. As a result, the camel arrives at the market with 1000-466 2/3=533 1/3 bananas.

The full scenario looks as follows: first, the camel takes 1000 bananas to point A. There it drops 600 bananas and returns with 200 bananas. Then the camel takes again 1000 bananas to point A. Again, it drops 600 bananas and returns with 200 bananas. After this, the camel takes the last 1000 bananas from the plantation to point A. From point A, it leaves with 1000 bananas to point B. In point B, it drops 333 1/3 bananas and returns with 333 1/3 bananas. Then it takes the second load of 1000 bananas from point A to point B. Finally, it carries the 1000 bananas from point B to the market, where it arrives with 533 1/3 bananas.

A number is called a palindrome when it is equal to the number you get when all its digits are reversed. For example, 2772 is a palindrome. We discovered a curious thing. We took the number 461, reversed the digits, giving the number 164, and calculated the sum of these two numbers: 461 164 + ------- 625 We repeated the process of reversing the digits and calculating the sum two more times: 625 526 + ------- 1151 1511 + ------- 2662 To our surprise, the result 2662 was a palindrome. We decided to see if this was a pure coincidence or not. So we took another 3-digit number, reversed it, which gave a larger number, and added the two. The result was not a palindrome. We repeated the process, which resulted in another 3-digit number which was still not a palindrome. We had to repeat the process twice more to finally arrive at a 4-digit number which was a palindrome. What was the 3-digit number we started with the second time?

Because the reverse of the starting number is greater than the starting number itself, the first digit of the starting number must be less than the last digit. Therefore, the starting number must be at least 102. Secondly, we know that after two summations, the result has still only 3 digits.

abc
cba +
----
def
fed +
----
ghi

General Gasslefield, accused of high treason, is sentenced to death by the court-martial. He is allowed to make a final statement, after which he will be shot if the statement is false or will be hung if the statement is true. Gasslefield makes his final statement and is released. What could he have said?

General Gasslefield said: "I will be shot." If this statement was true, he would have been hung and thus not be shot. But then his statement would be false, which implies that he

should be shot, making the statement true again, etc... In other words: the verdict of the court-martial could not be executed and the general was released.

On a nice summer day two tourists visit the Dutch city of Gouda. During their tour through the center they spot a cosy terrace. They decide to have a drink and, as an appetizer, a portion of hot "bitterballs" (bitterballs are a Dutch delicacy, similar to croquettes). The waiter tells them that the bitterballs can be served in portions of 6, 9, or 20. What is the largest number of bitterballs that cannot be ordered in these portions?

Every natural number is member of one of the following six series:
0, 6, 12, 18, ...
1, 7, 13, 19, ...
2, 8, 14, 20, ...
3, 9, 15, 21, ...
4, 10, 16, 22, ...
5, 11, 17, 23, ...

If for a number in one of these series holds that it can be made using the numbers 6, 9, and 20, then this also holds for all subsequent numbers in the series (by adding a multiple of 6). To find out what the largest number is that cannot be made using the numbers 6, 9, and 20, we therefore only need to know, for every series, what the smallest number is that can be made in that way. In the series 0, 6, 12, 18, ... the smallest number that can be made is 0 so there is no number that cannot be made.In the series 1, 7, 13, 19, ... the smallest number that can be made is 49 (20+20+9) so 43 is the largest number that cannot be made.

In the series 2, 8, 14, 20, ... the smallest number that can be made is 20 so 14 is the largest number that cannot be made.In the series 3, 9, 15, 21, ... the smallest number that can be made is 9 so 3 is the largest number that cannot be made.In the series 4, 10, 16, 22, ... the smallest number that can be made is 40 (20+20) so 34 is the largest number that cannot be made.In the series 5, 11, 17, 23, ... the smallest number that can be made is 29 (20+9) so 23 is the largest number that cannot be made.Therefore, 43 is the largest number that cannot be made using the numbers 6, 9, and 20..

Two friends, Alex and Bob, go to a bookshop, together with their sons Peter and Tim. All four of them buy some books; each book costs a whole amount in shillings. When they leave the bookshop, they notice that both fathers have spent 21 shillings more than their respective sons. Moreover, each of them paid per book the same amount of shillings as books that he bought. The difference between the number of books of Alex and Peter is five. Who is the father of Tim?

For each father-son couple holds: the father bought x books of x shillings, the son bought y books of y shillings. The difference between their expenses is 21 shillings, thus x2 - y2 = 21. Since x and y are whole numbers (each book costs a whole amount of shillings), there are two possible solutions: (x=5, y=2) or (x=11, y=10). Because the

difference between Alex and Peter is 5 books, this means that father Alex bought 5 books and son Peter 10. This means that the other son, Tim, bought 2 books, and that his father is Alex.

A man decides to buy a nice horse. He pays $60 for it, and he is very content with the strong animal. After a year, the value of the horse has increased to $70 and he decides to sell the horse. But already a few days later he regrets his decision to sell the beautiful horse, and he buys it again. Unfortunately he has to pay $80 to get it back, so he loses $10. After another year of owning the horse, he finally decides to sell the horse for $90. What is the overall profit the man makes?

Consider the trade-story as if it describes two separate trades, where: In the first trade, the man buys something for $60 and sells it again for $70, so he makes a profit of $10.

In the second trade, the man buys something for $80 and sells it again for $90, so he makes again a profit of $10.

Conclusion: The man makes an overall profit of $10 + $10 = $20.
You can also look at the problem as follows: the total expenses are $60 + $80 = $140 and the total earnings are $70 + $90 = $160. The overall profit is therefore $160 - $140 = $20.

Yesterday evening, Helen and her husband invited their neighbors (two couples) for a dinner at home. The six of them sat at a round table. Helen tells you the following: "Victor sat on the left of the woman who sat on the left of the man who sat on the left of Anna. Esther sat on the left of the man who sat on the left of the woman who sat on the left of the man who sat on the left of the woman who sat on the left of my husband. Jim sat on the left of the woman who sat on the left of Roger. I did not sit beside my husband." What is the name of Helen's husband?

From the second statement, we know that the six people sat at the table in the following way (clockwise and starting with Helen's husband):

Helen's husband, woman, man, woman, man, Esther Because Helen did not sit beside her husband, the situation must be as follows: Helen's husband, woman, man, Helen, man, Esther The remaining woman must be Anna, and combining this with the first statement, we arrive at the following situation:Helen's husband, Anna, man, Helen, Victor, Esther Because of the third statement, Jim and Roger can be placed in only one way, and we now know the complete order:Helen's husband Roger, Anna, Jim, Helen, Victor, Esther Conclusion: the name of Helen's husband is Roger. .

In the middle of a round pool lies a beautiful water-lily. The water-lily doubles in size every day. After exactly 20 days the complete pool will be covered by the lily. After how many days will half of the pool be covered by the water-lily?

Because the water-lily doubles its size every day and the complete pool is covered after 20 days, half of the pool will be covered one day before that, after 19 days. Conclusion: After 19 days half of the pool will be covered by the water-lily

Jack and his wife went to a party where four other married couples were present. Every person shook hands with everyone he or she was not acquainted with. When the handshaking was over, Jack asked everyone, including his own wife, how many hands they shook. To his surprise, Jack got nine different answers. How many hands did Jack's wife shake?

Because, obviously, no person shook hands with his or her partner, nobody shook hands with more than eight other people. And since nine people shook hands with different numbers of people, these numbers must be 0, 1, 2, 3, 4, 5, 6, 7, and 8. The person who shook 8 hands only did not shake hands with his or her partner, and must therefore be married to the person who shook 0 hands. The person who shook 7 hands, shook hands with all people who also shook hands with the person who shook 8 hands (so in total at least 2 handshakes per person), except for his or her partner. So this person must be married to the person who shook 1 hand. The person who shook 6 hands, shook hands with all people who also shook hands with the persons who shook 8 and 7 hands (so in total at least 3 handshakes per person), except for his or her partner. So this person must be married to the person who shook 2 hands. The person who shook 5 hands, shook hands with all people who also shook hands with the persons who shook 8, 7, and 6 hands (so in total at least 4 handshakes per person), except for his or her partner. So this person must be married to the person who shook 3 hands. The only person left, is the one who shook 4 hands, and which must be Jack's wife. The answer is: Jack's wife shook 4 hands.

Barbara has boxes in three sizes: large, standard, and small. She puts 11 large boxes on a table. She leaves some of these boxes empty, and in all the other boxes she puts 8 standard boxes. She leaves some of these standard boxes empty, and in all the other standard boxes she puts 8 (empty) small boxes. Now, 102 of all the boxes on the table are empty. How many boxes has Barbara used in total?

By putting 8 boxes in a box, the total number of empty boxes increases by 8 - 1 = 7. If we call x the number of times that 8 boxes have been put in a box, we know that 11 + 7x = 102. It follows that x=13. In total, 11 + 13 × 8 = 115 boxes have been used.

Here is a sequence of numbers: 1 11 21 1211 111221 It seems to be a strange sequence, but yet there is a system behind it... What is the next term in this sequence?

Again, the system behind the sequence is that each number (except the first one of the sequence) "describes" the previous number. Now, however, the number of occurrences of each cipher is counted. So 1231 means one "2" and three times a "1", and 131221 means one "3", one "2", and two times a "1". The number following on 131221 is therefore 132231 (one "3", two times a "2", and three times a "1"). The complete sequence is as

follows: 1 11 21 1211 1231 131221 132231 232221 134211 14131231 14231241 24132231 14233221 14233221 etcetera .

A light bulb is hanging in a room. Outside of the room there are three switches, of which only one is connected to the lamp. In the starting situation, all switches are 'off' and the bulb is not lit. If it is allowed to check in the room only once to see if the bulb is lit or not (this is not visible from the outside), how can you determine with which of the three switches the light bulb can be switched on?

To find the correct switch (1, 2, or 3), turn switch 1 to 'on' and leave it like that for a few minutes. After that you turn switch 1 back to 'off', and turn switch 2 to 'on'. Now enter the room. If the light bulb is lit, then you know that switch 2 is connected to it. If the bulb is not lit, then it has to be switch 1 or 3. Now touching for short the light bulb, will give you the answer: if the bulb is still hot, then switch 1 was the correct one; if the bulb is cold, then it has to be switch 3.

Using the ciphers 1 up to 9, three numbers (of three ciphers each) can be formed, such that the second number is twice the first number, and the third number is three times the first number. Which are these three numbers?

There are two solutions:
192, 384, and 576.
327, 654, and 981.

A man has a wolf, a goat, and a cabbage. He must cross a river with the two animals and the cabbage. There is a small rowing-boat, in which he can take only one thing with him at a time. If, however, the wolf and the goat are left alone, the wolf will eat the goat. If the goat and the cabbage are left alone, the goat will eat the cabbage. How can the man get across the river with the two animals and the cabbage?

There are two solutions: First, the man takes the goat across, leaving the wolf with the cabbage. Then he goes back. Next, he takes the wolf across. Then the man goes back, taking the goat with him. After this, he takes the cabbage across. Then he goes back again, leaving the wolf with the cabbage. Finally, he takes the goat across. First, the man takes the goat across, leaving the wolf with the cabbage. Then he goes back. Next, he takes the cabbage across. Then the man goes back, taking the goat with him. After this, he takes the wolf across. Then he goes back again, leaving the wolf with the cabbage. Finally, he takes the goat across.

Of all the numbers whose literal representations in capital letters consists only of straight line segments (for example, FIVE), only one number has a value equal to the number of segments used to write it. Which number has this property?

This is the only solution that satisfies the requirement that the capital letters shall consist only of straight line segments.

Greengrocer C. Carrot wants to expose his oranges neatly for sale. Doing this he discovers that one orange is left over when he places them in groups of three. The same happens if he tries to place them in groups of 5, 7, or 9 oranges. Only when he makes groups of 11 oranges, it fits exactly. How many oranges does the greengrocer have at least?

Assume the number of oranges is A. Then A-1 is divisible by 3, 5, 7 and 9. So, A-1 is a multiple of 5×7×9 = 315 (note: 9 is also a multiple of 3, so 3 must not be included!). We are looking for a value of N for which holds that 315×N + 1 is divisible by 11. After some trying it turns out that N = 3. This means that the greengrocer has 946 oranges.

A number is called a palindrome when it is equal to the number you get when all its digits are reversed. For example, 2772 is a palindrome. We discovered a curious thing. We took the number 461, reversed the digits, giving the number 164, and calculated the sum of these two numbers: 461 164 + ------- 625 We repeated the process of reversing the digits and calculating the sum two more times: 625 526 + ------- 1151 1511 + ------- 2662 To our surprise, the result 2662 was a palindrome. We decided to see if this was a pure coincidence or not. So we took another 3-digit number, reversed it, which gave a larger number, and added the two. The result was not a palindrome. We repeated the process, which resulted in another 3-digit number which was still not a palindrome. We had to repeat the process twice more to finally arrive at a 4-digit number which was a palindrome. What was the 3-digit number we started with the second time?

Because the reverse of the starting number is greater than the starting number itself, the first digit of the starting number must be less than the last digit. Therefore, the starting number must be at least 102. Secondly, we know that after two summations, the result has still only 3 digits.

abc

cba +

----

def

fed +

----

ghi

We know that def is not a palindrome. Therefore, d differs from f. This is only possible if d=f+1 (d can only be one greater than f, because b is at most 9). Since abc is at least 102, def is at least 403, so d+f will be at least 7. Since ghi is still a 3-digit number but not a palindrome, i can be at most 8, so d+f can be at most 8. Since d=f+1, d+f can only be 7,

from which we conclude that a=1 and c=2. Now we have:

1b2

2b1 +

4e3

To make the first digit of 4e3 a 4, b must be 5, 6, 7, 8, or 9. Now calculate the sum of 4e3 and 3e4:

4e3

3e4 +

8h7

Because the first digit of the sum must be 8, e must be at least 5. Therefore, the only remaining candidates for b are 8 (8+8=16) and 9 (9+9=18). Now it can easily be found that b must be 9 and the starting number we are looking for is 192:

192

291 + (291 is greater than 192)

483

384 +

---

867 (still a 3-digit number)

768 +

1635

5361 +

6996 (the 4-digit palindrome).

The legendary king Midas possessed a huge amount of gold. He hid this treasure carefully: in a building consisting of a number of rooms. In each room there were a number of boxes; this number was equal to the number of rooms in the building. Each box contained a number of golden coins that equaled the number of boxes per room. When the king died, one box was given to the royal barber. The remainder of the coins had to be divided fairly between his six sons. Is a fair division possible in all situations?

A fair division of Midas' coins is indeed possible. Let the number of rooms be N. This means that per room there are N boxes with N coins each. In total there are N×N×N = N3 coins. One box with N coins goes to the barber. For the six brothers, N3 - N coins remain. We can write this as: N(N2 - l), or: N(N - 1)(N + l). This last expression is divisible by 6 in all cases, since a number is divisible by 6 when it is both divisible by 3 and even. This is indeed the case here: whatever N may be, the expression N(N - 1)(N + l) always contains three successive numbers. One of those is always divisible by 3, and at least one of the others is even. This even holds when N=1; in that case all the brothers get nothing, which is also a fair division!

On a sunny morning, a greengrocer places 200 kilograms of cucumbers in cases in front of his shop. At that moment, the cucumbers are 99% water. In the afternoon, it turns out that it is the hottest day of the year, and as a result, the cucumbers dry out a little bit. At the end of the day, the greengrocer has not sold a single cucumber, and the cucumbers are only 98% water. How many kilograms of cucumbers has the greengrocer left at the end of the day?

In the morning, the 200 kilograms of cucumbers are 99% water. So the non-water part of the cucumbers has a mass of 2 kilograms. At the end of the day, the cucumbers are 98% water. The remaining 2% is still the 2 kilograms of non-water material (which does not change when the water evaporates). If 2% equals 2 kilograms, then 100% equals 100 kilograms. So, the greengrocer has 100 kilograms of cucumbers left at the end of the day.

A swimmer jumps from a bridge over a canal and swims 1 kilometer stream up. After that first kilometer, he passes a floating cork. He continues swimming for half an hour and then turns around and swims back to the bridge. The swimmer and the cork arrive at the bridge at the same time. The swimmer has been swimming with constant speed. How fast does the water in the canal flow?

If you have written down a full paper of mathematical formulas, you have been thinking too complicated...It is obvious that the cork does not move relatively to the water (i.e. has the same speed as the water). So if the swimmer is swimming away from the cork for half an hour (up stream), it will take him another half hour to swim back to the cork again. Because the swimmer is swimming with constant speed (constant relatively to the speed of the water!) you can look at it as if the water in the river doesn't move, the cork doesn't

move, and the swimmer swims a certain time away from the cork and then back. So in that one hour time, the cork has floated from 1 kilometer up stream to the bridge. Conclusion: The water in the canal flows at a speed of 1 km/h..

Consider a road with two cars, at a distance of 100 kilometers, driving towards each other. The left car drives at a speed of forty kilometers per hour and the right car at a speed of sixty kilometers per hour. A bird starts at the same location as the right car and flies at a speed of 80 kilometers per hour. When it reaches the left car it turns its direction, and when it reaches the right car it turns its direction again to the opposite, etcetera. What is the total distance that the bird has traveled at the moment that the two cars have reached each other?

If you have written down a full paper of mathematical formulas, you haven't been thinking in the right direction. It is obvious that the two cars meet each other after one hour. On that moment, the bird has flown for one hour. Conclusion: The bird has flown 80 km/h × 1 h = 80 km. .

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A number is called a palindrome when it is equal to the number you get when all its digits Postman Pat delivers the mail in the small village Tenhouses. This village, as you already suspected, has only one street with exactly ten houses, numbered from 1 up to and including 10. In a certain week, Pat did not deliver any mail at two houses in the village; at the other houses he delivered mail three times each. Each working day he delivered mail at exactly four houses. The sums of the house numbers where he delivered mail were: on Monday: 18 on Tuesday: 12 on Wednesday: 23 on Thursday: 19 on Friday: 32 op Saturday: 25 on Sunday: he never works Which two houses didn't get any mail that week?

If postman Pat would have delivered mail three times at each house, then the total sum of the house numbers per day would be (1+2+3+4+5+6+7+8+9+10)×3=165. Now that sum is 18+12+23+19+32+25=129. The difference is 165-129=36; divided by 3 this is 12. The sum of the house numbers where no mail was delivered is therefore 12. The following combinations are possible: 2+10

3+9

4+8
5+7
Each day at four houses the mail was delivered. On Tuesday the sum was 12. 12 can only be made from four house numbers in 2 ways:

1+2+3+6
1+2+4+5
The same holds for Friday with the sum of 32

5+8+9+10
6+7+9+10

From this we can conclude that the house numbers 1, 2, 9 and 10 for sure have received mail, which means that the combinations 2+10 and 3+9 are not possible. Also the combination 5+7 is not possible, because mail was delivered either at house 5 or at house 7. Thus the only remaining solution is: houses 4 and 8.

N.B.: there are various possibilities for the actual post delivery of the whole week. For example: Monday houses 1, 3, 5 and 9

Tuesday houses 1, 2, 3 and 6

Wednesday houses 1, 5, 7 and 10

Thursday houses 2, 3, 5 and 9

Friday houses 6, 7, 9 and 10

Saturday houses 2, 6, 7 and 10 .

You walk upwards on an escalator, with a speed of 1 step per second. After 50 steps you are at the end. You turn around and run downwards with a speed of 5 steps per second. After 125 steps you are back at the beginning of the escalator. How many steps do you need if the escalator stands still?

Let v be the speed of the escalator, in steps per second. Let L be the number of steps that you need to take when the escalator stands still. Upwards (along with the escalator), you walk 1 step per second. You need 50 steps, so that takes 50 seconds. This gives: L - 50 × v = 50. Downwards (against the direction of the escalator), you walk 5 steps per second. You need 125 steps, so that takes 25 seconds. This gives: L + 25 × v = 125. From the two equations follows: L = 100, v = 1. When the escalator stands still, you need 100 steps..

A cable, 16 meters in length, hangs between two pillars that are both 15 meters high. The ends of the cable are attached to the tops of the pillars. At its lowest point, the cable hangs 7 meters above the ground. How far are the two pillars apart?

Note that it is a kind of trick question: the pillars stand next to each other. Which means that the cable goes 8 meters straight down and 8 meters straight up. Conclusion: The distance between the pillars is zero meters..

From a book, a number of pages are missing. The sum of the page numbers of these pages is 9808. Which pages are missing?

Let the number of missing pages be n and the first missing page p+1. Then the pages p+1 up to and including p+n are missing, and n times the average of the numbers of the missing pages must be equal to 9808:

n×(((p+1)+(p+n))/2) = 9808

In other words:

n×(2×p+n+1)/2 = 2×2×2×2×613

So:

n×(2×p+n+1) = 2×2×2×2×2×613

One of the two terms n and 2×p+n+1 must be even, and the other one must be odd. Moreover, the term n must be smaller than the term 2×p+n+1. It follows that there are only two solutions:

n=1 and 2×p+n+1=2×2×2×2×2×613, so n=1 and p=9808, so only page 9808 is missing. n=2×2×2×2×2 and 2×p+n+1=613, so n=32 and p=290, so the pages 291 up to and including 322 are missing.

Because it is asked which pages (plural) are missing, the solution is: the pages 291 up to and including 322 are missing.

In front of you are 10 bags, filled with marbles. The number of marbles in each bag differs, but all bags contain ten marbles or more. Nine of the ten bags only contain marbles of 10 grams each. One bag only contains marbles of 9 grams. In addition, you have a balance which can weigh in grams accurate, and you are allowed to use it only once (i.e. weigh a single time). How can you find out in one weighing, which bag contains the marbles of 9 grams?

Number the ten bags from 1 up to and including 10. Then take one marble from bag 1, two marbles from bag 2, three marbles from bag 3, etc. Place all 55 marbles that you selected from the bags together on the balance. The number of grams that the total weight of these 55 marbles differs from 550 grams, is equal to the number of marbles of 9 grams that are among those 55 marbles, and that is equal to the number of the bag which contains the marbles of 9 grams.

A snail is at the bottom of a 20 meters deep pit. Every day the snail climbs 5 meters upwards, but at night it slides 4 meters back downwards. How many days does it take before the snail reaches the top of the pit?

On the first day, the snail reaches a height of 5 meters and slides down 4 meters at night, and thus ends at a height of 1 meter. On the second day, he reaches 6 m., but slides back to 2 m. On the third day, he reaches 7 m., and slides back to 3 m. ... On the fifteenth day, he reaches 19 m., and slides back to 15 m. On the sixteenth day, he reaches 20 m., so now he is at the top of the pit! Conclusion: The snail reaches the top of the pit on the 16th day!... .

William lives in a street with house-numbers 8 up to and including 100. Lisa wants to know at which number William lives. She asks him: "Is your number larger than 50?" William answers, but lies. Upon this Lisa asks: "Is your number a multiple of 4?" William answers, but lies again. Then Lisa asks: "Is your number a square?" William answers truthfully. Upon this Lisa says: "I know your number if you tell me whether the first digit is a 3." William answers, but now we don't know whether he lies or speaks the truth. Thereupon Lisa says at which number she thinks William lives, but (of course) she is wrong. What is Williams real house-number?

Note that Lisa does not know that William sometimes lies. Lisa reasons as if William speaks the truth. Because Lisa says after her third question, that she knows his number if he tells her whether the first digit is a 3, we can conclude that after her first three questions, Lisa still needs to choose between two numbers, one of which starts with a 3. A number that starts with a 3, must in this case be smaller than 50, so William's (lied) answer to Lisa's first question was "No". Now there are four possibilities: number is a multiple of 4 : (16, 36 number is a square) : 8, 12, 20, and more number is not a square number is not a multiple of 4 : (9, 25, 49 number is a square) : 10, 11, 13, and more number is not a square Only the combination "number is a multiple of 4" and "number is a square" results in two numbers, of which one starts with a 3. William's (lied) answer to Lisa's second question therefore was "Yes", and William's (true) answer to Lisa's third question was also "Yes". In reality, William's number is larger than 50, not a multiple of 4, and a square. Of the squares larger than 50 and at most 100 (these are 64, 81, and 100), this only holds for 81. Conclusion: William's real house-number is 81.

The poor have it, the rich want it, but if you eat it you will die. What is this?

Nothing!

The gentlemen Dutch, English, Painter, and Writer are all teachers at the same secondary school. Each teacher teaches two different subjects. Furthermore: Three teachers teach Dutch language There is only one math teacher There are two teachers for chemistry Two teachers, Simon and mister English, teach history Peter doesn't teach Dutch language Steven is chemistry teacher Mister Dutch doesn't teach any course that is tought by Karl or mister Painter. What is the full name of each teacher and which two subjects does each one teach?

Since Peter as only one doesn't teach Dutch language, and mister Dutch doesn't teach any course that is tought by Karl or mister Painter, it follows that Peter and mister Dutch are the same person and that he is at least math teacher. Simon and mister English both teach history, and are also among the three Dutch teachers. Peter Dutch therefore has to teach next to math, also chemistry. Because Steven is also chemistry teacher, he cannot be mister English or mister Painter, so he must be mister Writer. Since Karl and mister Painter are two different persons, just like Simon and mister English, the names of the other two teachers are Karl English and Simon Painter. Summarized:Peter Dutch, math and chemistrySteven Writer, Dutch and chemistrySimon Painter, Dutch and historyKarl English, Dutch and history..

You are standing next to a well, and you have two jugs. One jug has a content of 3 liters and the other one has a content of 5 liters. How can you get just 4 liters of water using only these two jugs?

Solution 1: Fill the 5 liter jug. Then fill the 3 liter jug to the top with water from the 5 liter jug. Now you have 2 liters of water in the 5 liter jug. Dump out the 3 liter jug and pour what's in the 5 liter jug into the 3 liter jug. Then refill the 5 liter jug, and fill up the 3 liter jug to the top. Since there were already 2 liters of water in the 3 liter jug, 1 liter is removed from the 5 liter jug, leaving 4 liters of water in the 5 liter jug. Solution 2: Fill the 3 liter jug and pour it into the 5 liter jug. Then refill the 3 liter jug and fill up the 5 liter jug to the top. Since there were already 3 liters of water in the 5 liter jug, 2 liters of water are removed from the 3 liter jug, leaving 1 liter of water in the 3 liter jug. Then dump out the 5 liter jug and pour what's in the 3 liter jug into the 5 liter jug. Refill the 3 liter jug and pour it into the 5 liter jug. Now you have 4 liters of water in the 5 liter jug.

On the market of Covent Garden, mrs. Smith and mrs. Jones sell apples. Mrs. Jones sells her apples for two per shilling. The apples of Mrs. Smith are a bit smaller; she sells hers for three per shilling. At a certain moment, when both ladies both have the same amount of apples left, Mrs. Smith is being called away. She asks her neighbour to take care of her goods. To make everything not too complicated, Mrs. Jones simply puts all apples to one big pile, and starts selling them for two shilling per five apples. When Mrs. Smith returns the next day, all apples have been sold. But when they start dividing the money, there appears to be a shortage of seven shilling. Supposing they divide the amount equally, how much does mrs. Jones lose with this deal?

The big pile of apples contains the same amount of large apples of half a shilling each (from mrs. Jones), as smaller apples of one third shilling each (from mrs. Smith). The average price is therefore (1/2 + 1/3)/2 = 5/12 shilling. But the apples were sold for 2/5 shilling each (5 apples for 2 shilling). Or: 25/60 and 24/60 shilling respectively. This means that per sold apple there is a shortage of 1/60 shilling. The total shortage is 7 shilling, so the ladies together started out with 420 apples. These are worth 2/5 × 420 = 168 shilling, or with equal division, 84 shilling for each. If Mrs. Jones would have sold her apples herself, she would have received 105 shilling. Conclusion: Mrs. Jones loses 21 shilling in this deal.

A long, long time ago, two Egyptian camel drivers were fighting for the hand of the daughter of the sheik of Abbudzjabbu. The sheik, who liked neither of these men to become the future husband of his daughter, came up with a clever plan: a race would determine who of the two men would be allowed to marry his daughter. And so the sheik organized a camel race. Both camel drivers had to travel from Cairo to Abbudzjabbu, and the one whose camel would arrive last in Abbudzjabbu, would be allowed to marry the sheik's daughter. The two camel drivers, realizing that this could become a rather lengthy expedition, finally decided to consult the Wise Man of their village. Arrived there, they explained him the situation, upon which the Wise Man raised his cane and spoke four wise words. Relieved, the two camel drivers left his tent: they were ready for the contest! Which 4 wise words did the Wise Man speak?

Take each other's camel..

In the Tour de France, what is the position of a rider, after he passes the second placed rider?

Second

It's always 1 to 6, it's always 15 to 20, it's always 5, but it's never 21, unless it's flying. What is this?

The answer is: a dice. An explanation: "It's always 1 to 6": the numbers on the faces of the dice, "it's always 15 to 20": the sum of the exposed faces when the dice comes to rest after being thrown, "it's always 5": the number of exposed faces when the dice is at rest, "but it's never 21": the sum of the exposed faces is never 21 when the dice is at rest, "unless it's flying": the sum of all exposed faces when the dice is flying is 21 (1 + 2 + 3 + 4 + 5 + 6)..

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sold her apples herself, she would have received 105 shilling. Conclusion: Mrs. Jones loses 21 shilling in this deal..

In Miss Miranda's class are eleven children. Miss Miranda has a bowl with eleven apples. Miss Miranda wants to divide the eleven apples among the children of her class, in such a way that each child in the end has an apple and one apple remains in the bowl. Can you help Miss Miranda?

Ten children get a single apple, and the eleventh gets the bowl with an apple still in it..

Below are a number of statements: 1. Precisely one of these statements is untrue. 2. Precisely two of these statements are untrue. 3. Precisely three of these statements are untrue. 4. Precisely four of these statements are untrue. 5. Precisely five of these statements are untrue. 6. Precisely six of these statements are untrue. 7. Precisely seven of these statements are untrue. 8. Precisely eight of these statements are untrue. 9. Precisely nine of these statements are untrue. 10. Precisely ten of these statements are untrue. Which of these statements is true?

The ten statements all contradict each other. So there can be at most one statement true. Now suppose there is no statement true. That would mean that statement 10 indeed would be true, which results in a contradiction. This means that exactly nine statements must be untrue, and thus only statement 9 is true..

Joyce has bought ten trees for her garden. She wants to plant these trees in five rows, with four trees in each row. The Question :How must Joyce plant the trees?

The trees must be planted on the edges of a five pointed star:.

The fraction EVE/DID = 0,TALKTALKTALKTALK... is a normal fraction that can also be written as a recurring decimal. Which fraction is this (equal letters are equal ciphers)?

The two solutions are:212/606=0,34983498...242/303=0,79867986... .

A traveler, on his way to Eindhoven, reaches a road junction, where he can turn left or right. He knows that only one of the two roads leads to Eindhoven, but unfortunately, he does not know which one. Fortunately, he sees two twin-brothers standing at the road junction, and he decides to ask them for directions. The traveler knows that one of the two brothers always tells the truth and the other one always lies. Unfortunately, he does not know which one always tells the truth and which one always lies. How can the traveler find out the way to Eindhoven by asking just one question to one of the two brothers?

The question that the traveler should ask is: "Does the left road lead to Eindhoven according to your brother?" If the answer is "Yes", the traveler should turn right, and if

the answer is "No", the traveler should turn left. Explanation: There are four possible cases: The traveler asks the question to the truth-telling brother, and the left road leads to Eindhoven. The truth-telling brother knows that his lying brother would say that the left road does not lead to Eindhoven, and so he answers "No". The traveler asks the question to the truth-telling brother, and the right road leads to Eindhoven. The truth-telling brother knows that his lying brother would say that the left road leads to Eindhoven, and so he answers "Yes". The traveler asks the question to the lying brother, and the left road leads to Eindhoven. The lying brother knows that his truth-telling brother would say that the left road leads to Eindhoven, and so he lies "No". The traveler asks the question to the lying brother, and the right road leads to Eindhoven. The lying brother knows that his truth-telling brother would say that the left road does not lead to Eindhoven, and so he lies "Yes"..

This is a most unusual paragraph. How quickly can you find out what is so unusual about it? It looks so ordinary that you would think that nothing is wrong with it at all, and, in fact, nothing is. But it is unusual. Why? If you study it and think about it, you may find out, but I am not going to assist you in any way. You must do it without any hints or coaching. No doubt, if you work at it for a bit, it will dawn on you. Who knows? Go to work and try your skill. Good luck! What is unusual about the above paragraph?

The paragraph doesn't contain a single letter "e"..

There is a whole number n for which the following holds: if you put a 4 at the end of n, and multiply the number you get in that way by 4, the result is equal to the number you get if you put a 4 in front of n. In other words, we are looking for the number you can put on the dots in the following equation: 4... = 4 ...4 Which number must be put on the dots to get a correct equation?

The number 10169491525423728813559322033898305084745762711864406779 6. .

A boy leaves home in the morning to go to school. At the moment he leaves the house he looks at the clock in the mirror. The clock has no number indication and for this reason the boy makes a mistake in interpreting the time (mirror-image). Just assuming the clock must be out of order, the boy cycles to school, where he arrives after twenty minutes. At that moment the clock at school shows a time that is two and a half hours later than the time that the boy saw on the clock at home. At what time did he reach school?

The difference between the real time and the time of the mirror image is two hours and ten minutes (two and a half hours, minus the twenty minutes of cycling). Therefore, the original time on the clock at home that morning could only have been five minutes past seven: The difference between these clocks is exactly 2 hours and ten minutes (note that also five minutes past one can be mirrored in a similar way, but this is not in the morning!).Conclusion: The boy reaches school at five minutes past seven plus twenty minutes of cycling, which is twenty-five minutes past seven!.

An old farmer died and left 17 cows to his three sons. In his will, the farmer stated that his oldest son should get 1/2, his middle son should get 1/3, and his youngest son should get 1/9 of all the cows. The sons, who did not want to end up with half cows, sat for days trying to figure out how many cows each of them should get. One day, their neighbour came by to see how they were doing after their father's death. The three sons told him their problem. After thinking for a while, the neighbour said: "I'll be right back!" He went away, and when he came back, the three sons could divide the cows according to their father's will, and in such a way that each of them got a whole number of cows. What was the neighbour's solution?

The neighbour borrowed an extra cow, to make the total number of cows 18. Then the oldest son got 1/2 of 18 is 9 cows, the middle son got 1/3 of 18 is 6 cows, and the youngest son got 1/9 of 18 is 2 cows. Since 9+6+2 = 17, the cows could be divided among the three brothers in such a way that the borrowed cow was left over, and could be returned to its owner..

There is a unique number of which the square and the cube together use all ciphers from 0 up to 9 exactly once. Which number is this?

The number is 69: 69^2 = 4761 and 69^3 = 328509..

HR Interview Questions

&

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HR Interview Questions

Tell me about yourself ?
Start with the present and tell why you are well qualified for the position. Remember that the key to all successful interviewing is to match your qualifications to what the interviewer is looking for. In other words you must sell what the buyer is buying. This is the single most important strategy in job hunting.

So, before you answer this or any question it's imperative that you try to uncover your interviewer's greatest need, want, problem or goal.

To do so, make you take these two steps:
Do all the homework you can before the **hr interview** to uncover this person's wants and needs (not the generalized needs of the industry or company)

As early as you can in the **interview**, ask for a more complete description of what the position entails. You might say: "I have a number of accomplishments I'd like to tell you about, but I want to make the best use of our time together and talk directly to your needs. To help me do, that, could you tell me more about the most important priorities of this position? All I know is what I (heard from the recruiter, read in the classified ad, etc.)"

Then, ALWAYS follow-up with a second and possibly, third **question**, to draw out his needs even more. Surprisingly, it's usually this second or third question that unearths what the interviewer is most looking for.

You might ask simply, "And in addition to that?..." or, "Is there anything else you see as essential to success in this position?:

This process will not feel easy or natural at first, because it is easier simply to answer questions, but only if you uncover the employer's wants and needs will your answers make the most sense. Practice asking these key questions before giving your answers, the process will feel more natural and you will be light years ahead of the other job candidates you're competing with.

After uncovering what the employer is looking for, describe why the needs of this job bear striking parallels to tasks you've succeeded at before. Be sure to illustrate with specific examples of your responsibilities and especially your achievements, all of which are geared to present yourself as a perfect match for the needs he has just described.

What are your greatest strengths ?

You know that your key strategy is to first uncover your interviewer's greatest wants and needs before you answer questions. And from Question 1, you know how to do this.

Prior to any interview, you should have a list mentally prepared of your greatest strengths. You should also have, a specific example or two, which illustrates each

strength, an example chosen from your most recent and most impressive achievements.

You should, have this list of your greatest strengths and corresponding examples from your achievements so well committed to memory that you can recite them cold after being shaken awake at 2:30AM.

Then, once you uncover your interviewer's greatest wants and needs, you can choose those achievements from your list that best match up.

As a general guideline, the 10 most desirable traits that all employers love to see in their employees are:

A proven track record as an achiever...especially if your achievements match up with the employer's greatest wants and needs.

Intelligence...management "savvy".

Honesty...integrity...a decent human being.

Good fit with corporate culture...someone to feel comfortable with...a team player who meshes well with interviewer's team.

Likeability...positive attitude...sense of humor.

Good communication skills.

Dedication...willingness to walk the extra mile to achieve excellence.

Definiteness of purpose...clear goals.

Enthusiasm...high level of motivation.

Confident...healthy...a leader.

What are your greatest weakness ?

Disguise a strength as a weakness.

Example: “I sometimes push my people too hard. I like to work with a sense of urgency and everyone is not always on the same wavelength.”

Drawback: This strategy is better than admitting a flaw, but it's so widely used, it is transparent to any experienced interviewer.

BEST ANSWER: (and another reason it's so important to get a thorough description of your interviewer's needs before you answer questions): Assure the interviewer that you can think of nothing that would stand in the way of your performing in this position with

excellence. Then, quickly review you strongest qualifications.

Example: “Nobody's perfect, but based on what you've told me about this position, I believe I' d make an outstanding match. I know that when I hire people, I look for two things most of all. Do they have the qualifications to do the job well, and the motivation to do it well? Everything in my background shows I have both the qualifications and a strong desire to achieve excellence in whatever I take on. So I can say in all honesty that I see nothing that would cause you even a small concern about my ability or my strong desire to perform this job with excellence.”

Alternate strategy (if you don't yet know enough about the position to talk about such a perfect fit):

Instead of confessing a weakness, describe what you like most and like least, making sure that what you like most matches up with the most important qualification for success in the position, and what you like least is not essential.

Example: Let's say you're applying for a teaching position. “If given a choice, I like to spend as much time as possible in front of my prospects selling, as opposed to shuffling paperwork back at the office. Of course, I long ago learned the importance of filing paperwork properly, and I do it conscientiously. But what I really love to do is sell (if your interviewer were a sales manager, this should be music to his ears.)

Tell me about something you did – or failed to do – that you now feel a little ashamed of ?

As with faults and weaknesses, never confess a regret. But don’t seem as if you’re stonewalling either.

Best strategy: Say you harbor no regrets, then add a principle or habit you practice regularly for healthy human relations.

Example: Pause for reflection, as if the question never occurred to you. Then say to **hr**, “You know, I really can’t think of anything.” (Pause again, then add): “I would add that as a general management principle, I’ve found that the best way to avoid regrets is to avoid causing them in the first place. I practice one habit that helps me a great deal in this regard. At the end of each day, I mentally review the day’s events and conversations to take a second look at the people and developments I’m involved with and do a double check of what they’re likely to be feeling. Sometimes I’ll see things that do need more follow-up, whether a pat on the back, or maybe a five minute chat in someone’s office to make sure we’re clear on things…whatever.”

“I also like to make each person feel like a member of an elite team, like the Boston Celtics or LA Lakers in their prime. I’ve found that if you let each team member know you expect excellence in their performance…if you work hard to set an example yourself…and if you let people know you appreciate and respect their feelings, you wind up with a

highly motivated group, a team that's having fun at work because they're striving for excellence rather than brooding over slights or regrets."

Why are you leaving (or did you leave) this position ?

(If you have a job presently tell the hr)

If you're not yet 100% committed to leaving your present post, don't be afraid to say so. Since you have a job, you are in a stronger position than someone who does not. But don't be coy either. State honestly what you'd be hoping to find in a new spot. Of course, as stated often before, you answer will all the stronger if you have already uncovered what this position is all about and you match your desires to it.

(If you do not presently have a job tell the hr.)

Never lie about having been fired. It's unethical – and too easily checked. But do try to deflect the reason from you personally. If your firing was the result of a takeover, merger, division wide layoff, etc., so much the better.

But you should also do something totally unnatural that will demonstrate consummate professionalism. Even if it hurts , describe your own firing – candidly, succinctly and without a trace of bitterness – from the company's point-of-view, indicating that you could understand why it happened and you might have made the same decision yourself.

Your stature will rise immensely and, most important of all, you will show you are healed from the wounds inflicted by the firing. You will enhance your image as first-class management material and stand head and shoulders above the legions of firing victims who, at the slightest provocation, zip open their shirts to expose their battle scars and decry the unfairness of it all.

For all prior positions:

Make sure you've prepared a brief reason for leaving. Best reasons: more money, opportunity, responsibility or growth.

The "Silent Treatment"

Like a primitive tribal mask, the Silent Treatment loses all it power to frighten you once you refuse to be intimidated. If your interviewer pulls it, keep quiet yourself for a while and then ask, with sincere politeness and not a trace of sarcasm, "Is there anything else I can fill in on that point?" That's all there is to it.

Whatever you do, don't let the Silent Treatment intimidate you into talking a blue streak, because you could easily talk yourself out of the position.

Why should I hire you?

By now you can see how critical it is to apply the overall strategy of uncovering the

employer's needs before you answer questions. If you know the employer's greatest needs and desires, this question will give you a big leg up over other candidates because you will give him better reasons for hiring you than anyone else is likely to…reasons tied directly to his needs.

Whether your interviewer asks you this question explicitly or not, this is the most important question of your interview because he must answer this question favorably in is own mind before you will be hired. So help him out! Walk through each of the position's requirements as you understand them, and follow each with a reason why you meet that requirement so well.

Example: "As I understand your needs, you are first and foremost looking for someone who can manage the sales and marketing of your book publishing division. As you've said you need someone with a strong background in trade book sales. This is where I've spent almost all of my career, so I've chalked up 18 years of experience exactly in this area. I believe that I know the right contacts, methods, principles, and successful management techniques as well as any person can in our industry."

"You also need someone who can expand your book distribution channels. In my prior post, my innovative promotional ideas doubled, then tripled, the number of outlets selling our books. I'm confident I can do the same for you."

"You need someone to give a new shot in the arm to your mail order sales, someone who knows how to sell in space and direct mail media. Here, too, I believe I have exactly the experience you need. In the last five years, I've increased our mail order book sales from $600,000 to $2,800,000, and now we're the country's second leading marketer of scientific and medical books by mail." Etc., etc., etc.,

Every one of these selling "couplets" (his need matched by your qualifications) is a touchdown that runs up your score. IT is your best opportunity to outsell your competition.

Aren't you overqualified for this position?
As with any objection, don't view this as a sign of imminent defeat. It's an invitation to teach the interviewer a new way to think about this situation, seeing advantages instead of drawbacks.

Example: "I recognize the job market for what it is – a marketplace. Like any marketplace, it's subject to the laws of supply and demand. So 'overqualified' can be a relative term, depending on how tight the job market is. And right now, it's very tight. I understand and accept that."

"I also believe that there could be very positive benefits for both of us in this match."

"Because of my unusually strong experience in _____ , I could start to contribute right away, perhaps much faster than someone who'd have to be brought along more slowly."

"There's also the value of all the training and years of experience that other companies have invested tens of thousands of dollars to give me. You'd be getting all the value of that without having to pay an extra dime for it. With someone who has yet to acquire that experience, he'd have to gain it on your nickel."

"I could also help you in many things they don't teach at the Harvard Business School. For example…(how to hire, train, motivate, etc.) When it comes to knowing how to work well with people and getting the most out of them, there's just no substitute for what you learn over many years of front-line experience. You company would gain all this, too."

"From my side, there are strong benefits, as well. Right now, I am unemployed. I want to work, very much, and the position you have here is exactly what I love to do and am best at. I'll be happy doing this work and that's what matters most to me, a lot more that money or title."

"Most important, I'm looking to make a long term commitment in my career now. I've had enough of job-hunting and want a permanent spot at this point in my career. I also know that if I perform this job with excellence, other opportunities cannot help but open up for me right here. In time, I'll find many other ways to help this company and in so doing, help myself. I really am looking to make a long-term commitment."

NOTE: The main concern behind the "overqualified" question is that you will leave your new employer as soon as something better comes your way. Anything you can say to demonstrate the sincerity of your commitment to the employer and reassure him that you're looking to stay for the long-term will help you overcome this objection.

Where do you see yourself five years from now?

Reassure your interviewer that you're looking to make a long-term commitment…that this position entails exactly what you're looking to do and what you do extremely well. As for your future, you believe that if you perform each job at hand with excellence, future opportunities will take care of themselves.

Example: "I am definitely interested in making a long-term commitment to my next position. Judging by what you've told me about this position, it's exactly what I'm looking for and what I am very well qualified to do. In terms of my future career path, I'm confident that if I do my work with excellence, opportunities will inevitable open up for me. It's always been that way in my career, and I'm confident I'll have similar opportunities here."

Describe your ideal company, location and job.

The only right answer is to describe what this company is offering, being sure to make your answer believable with specific reasons, stated with sincerity, why each quality represented by this opportunity is attractive to you.

Remember that if you're coming from a company that's the leader in its field or from a

glamorous or much admired company, industry, city or position, your interviewer and his company may well have an "Avis" complex. That is, they may feel a bit defensive about being "second best" to the place you're coming from, worried that you may consider them bush league.

This anxiety could well be there even though you've done nothing to inspire it. You must go out of your way to assuage such anxiety, even if it's not expressed, by putting their virtues high on the list of exactly what you're looking for, providing credible reason for wanting these qualities.

If you do not express genuine enthusiasm for the firm, its culture, location, industry, etc., you may fail to answer this "Avis" complex objection and, as a result, leave the interviewer suspecting that a hot shot like you, coming from a Fortune 500 company in New York, just wouldn't be happy at an unknown manufacturer based in Topeka, Kansas.

Why do you want to work at our company?

This question is your opportunity to hit the ball out of the park, thanks to the in-depth research you should do before any interview.

Best sources for researching your target company: annual reports, the corporate newsletter, contacts you know at the company or its suppliers, advertisements, articles about the company in the trade press.

What are your career options right now?

Prepare for this question by thinking of how you can position yourself as a desired commodity. If you are still working, describe the possibilities at your present firm and why, though you're greatly appreciated there, you're looking for something more (challenge, money, responsibility, etc.). Also mention that you're seriously exploring opportunities with one or two other firms.

If you're not working, you can talk about other employment possibilities you're actually exploring. But do this with a light touch, speak only in general terms. You don't want to seem manipulative or coy.

Why have you been out of work so long ?

You want to emphasize factors which have prolonged your job search by your own choice.

Example: "After my job was terminated, I made a conscious decision not to jump on the first opportunities to come along. In my life, I've found out that you can always turn a negative into a positive IF you try hard enough. This is what I determined to do. I decided to take whatever time I needed to think through what I do best, what I most want to do, where I'd like to do it…and then identify those companies that could offer such an

opportunity."

"Also, in all honesty, you have to factor in the recession (consolidation, stabilization, etc.) in the (banking, financial services, manufacturing, advertising, etc.) industry."

"So between my being selective and the companies in our industry downsizing, the process has taken time. But in the end, I'm convinced that when I do find the right match, all that careful evaluation from both sides of the desk will have been well worthwhile for both the company that hires me and myself.

Tell me honestly about the strong points and weak points of your boss (company, management team, etc.)
Remember the rule: Never be negative. Stress only the good points, no matter how charmingly you're invited to be critical.

Your interviewer doesn't care a whit about your previous boss. He wants to find out how loyal and positive you are, and whether you'll criticize him behind his back if pressed to do so by someone in this own company. This question is your opportunity to demonstrate your loyalty to those you work with.

What good books have you read lately?
Unless you're up for a position in academia or as book critic for The New York Times, you're not expected to be a literary lion. But it wouldn't hurt to have read a handful of the most recent and influential books in your profession and on management.

Consider it part of the work of your job search to read up on a few of these leading books. But make sure they are quality books that reflect favorably upon you, nothing that could even remotely be considered superficial. Finally, add a recently published bestselling work of fiction by a world-class author and you'll pass this question with flying colors.

Tell me about a situation when your work was criticized ?
Begin by emphasizing the extremely positive feedback you've gotten throughout your career and (if it's true) that your performance reviews have been uniformly excellent.

Of course, no one is perfect and you always welcome suggestions on how to improve your performance. Then, give an example of a not-too-damaging learning experience from early in your career and relate the ways this lesson has since helped you. This demonstrates that you learned from the experience and the lesson is now one of the strongest breastplates in your suit of armor.

If you are pressed for a criticism from a recent position, choose something fairly trivial that in no way is essential to your successful performance. Add that you've learned from this, too, and over the past several years/months, it's no longer an area of concern because you now make it a regular practice to…etc.

Another way to answer this question would be to describe your intention to broaden your master of an area of growing importance in your field. For example, this might be a

computer program you've been meaning to sit down and learn… a new management technique you've read about…or perhaps attending a seminar on some cutting-edge branch of your profession.

Again, the key is to focus on something not essential to your brilliant performance but which adds yet another dimension to your already impressive knowledge base.

What are your outside interests ?
Try to gauge how this company's culture would look upon your favorite outside activities and be guided accordingly.

You can also use this question to shatter any stereotypes that could limit your chances. If you're over 50, for example, describe your activities that demonstrate physical stamina. If you're young, mention an activity that connotes wisdom and institutional trust, such as serving on the board of a popular charity.

But above all, remember that your employer is hiring your for what you can do for him, not your family, yourself or outside organizations, no matter how admirable those activities may be.

The "Fatal Flaw" question
As every master salesperson knows, you will encounter objections (whether stated or merely thought) in every sale. They're part and parcel of the buyer's anxiety. The key is not to exacerbate the buyer's anxiety but diminish it. Here's how…

Whenever you come up against a fatal flaw question:

Be completely honest, open and straightforward about admitting the shortcoming. (Showing you have nothing to hide diminishes the buyer's anxiety.)

Do not apologize or try to explain it away. You know that this supposed flaw is nothing to be concerned about, and this is the attitude you want your interviewer to adopt as well.

Add that as desirable as such a qualification might be, its lack has made you work all the harder throughout your career and has not prevented you from compiling an outstanding tack record of achievements. You might even give examples of how, through a relentless commitment to excellence, you have consistently outperformed those who do have this qualification.

Of course, the ultimate way to handle "fatal flaw" questions is to prevent them from arising in the first place. You will do that by following the master strategy described in Question 1, i.e., uncovering the employers needs and them matching your qualifications to those needs.

Once you've gotten the employer to start talking about his most urgently-felt wants and goals for the position, and then help him see in step-by-step fashion how perfectly your

background and achievements match up with those needs, you're going to have one very enthusiastic interviewer on your hands, one who is no longer looking for "fatal flaws".

How do you feel about reporting to a younger person (minority, woman, etc)?
You greatly admire a company that hires and promotes on merit alone and you couldn't agree more with that philosophy. The age (gender, race, etc.) of the person you report to would certainly make no difference to you.

Whoever has that position has obviously earned it and knows their job well. Both the person and the position are fully deserving of respect. You believe that all people in a company, from the receptionist to the Chairman, work best when their abilities, efforts and feelings are respected and rewarded fairly, and that includes you. That's the best type of work environment you can hope to find.

On confidential matters…
Your interviewer may press you for this information for two reasons.

First, many companies use interviews to research the competition. It's a perfect set-up. Here in their own lair, is an insider from the enemy camp who can reveal prized information on the competition's plans, research, financial condition, etc.

Second, the company may be testing your integrity to see if you can be cajoled or bullied into revealing confidential data.

What to do? The answer here is easy. Never reveal anything truly confidential about a present or former employer. By all means, explain your reticence diplomatically. For example, "I certainly want to be as open as I can about that. But I also wish to respect the rights of those who have trusted me with their most sensitive information, just as you would hope to be able to trust any of your key people when talking with a competitor…"

And certainly you can allude to your finest achievements in specific ways that don't reveal the combination to the company safe.

But be guided by the golden rule. If you were the owner of your present company, would you feel it ethically wrong for the information to be given to your competitors? If so, steadfastly refuse to reveal it.

Remember that this question pits your desire to be cooperative against your integrity. Faced with any such choice, always choose integrity. It is a far more valuable commodity than whatever information the company may pry from you. Moreover, once you surrender the information, your stock goes down. They will surely lose respect for you.

One President we know always presses candidates unmercifully for confidential information. If he doesn't get it, he grows visibly annoyed, relentlessly inquisitive, It's all an act. He couldn't care less about the information. This is his way of testing the candidate's moral fiber. Only those who hold fast are hired.

What would you say to your boss if he's crazy about an idea, but you think it stinks ?

Remember the rule stated earlier: In any conflict between values, always choose integrity.

Example: I believe that when evaluating anything, it's important to emphasize the positive. What do I like about this idea?"

"Then, if you have reservations, I certainly want to point them out, as specifically, objectively and factually as I can."

"After all, the most important thing I owe my boss is honesty. If he can't count on me for that, then everything else I may do or say could be questionable in his eyes."

"But I also want to express my thoughts in a constructive way. So my goal in this case would be to see if my boss and I could make his idea even stronger and more appealing, so that it effectively overcomes any initial reservation I or others may have about it."

"Of course, if he overrules me and says, 'no, let's do it my way,' then I owe him my full and enthusiastic support to make it work as best it can."

How could you have improved your career progress ?

You're generally quite happy with your career progress. Maybe, if you had known something earlier in life (impossible to know at the time, such as the booming growth in a branch in your industry…or the corporate downsizing that would phase out your last job), you might have moved in a certain direction sooner.

But all things considered, you take responsibility for where you are, how you've gotten there, where you are going…and you harbor no regrets.

What would you do if a fellow executive on your own corporate level wasn't pulling his/her weight…and this was hurting your department?

Try to gauge the political style of the firm and be guided accordingly. In general, fall back on universal principles of effective human relations – which in the end, embody the way you would like to be treated in a similar circumstance.

Example: "Good human relations would call for me to go directly to the person and explain the situation, to try to enlist his help in a constructive, positive solution. If I sensed resistance, I would be as persuasive as I know how to explain the benefits we can all gain from working together, and the problems we, the company and our customers will experience if we don't."

POSSIBLE FOLLOW-UP QUESTION
And what would you do if he still did not change his ways?

ANSWER: "One thing I wouldn't do is let the problem slide, because it would only get worse and overlooking it would set a bad precedent. I would try again and again and again, in whatever way I could, to solve the problem, involving wider and wider circles of people, both above and below the offending executive and including my own boss if necessary, so that everyone involved can see the rewards for teamwork and the drawbacks of non-cooperation."

"I might add that I've never yet come across a situation that couldn't be resolved by harnessing others in a determined, constructive effort."

You've been with your firm a long time. Won't it be hard switching to a new company ?

To overcome this objection, you must point to the many ways you have grown and adapted to changing conditions at your present firm. It has not been a static situation. Highlight the different responsibilities you've held, the wide array of new situations you've faced and conquered.

As a result, you've learned to adapt quickly to whatever is thrown at you, and you thrive on the stimulation of new challenges.

To further assure the interviewer, describe the similarities between the new position and your prior one. Explain that you should be quite comfortable working there, since their needs and your skills make a perfect match.

May I contact your present employer for a reference ?

Express your concern that you'd like to keep your job search private, but that in time, it will be perfectly okay.

Example: "My present employer is not aware of my job search and, for obvious reasons; I'd prefer to keep it that way. I'd be most appreciative if we kept our discussion confidential right now. Of course, when we both agree the time is right, then by all means you should contact them. I'm very proud of my record there.

Give me an example of your creativity (analytical skill…managing ability, etc.)

Remember from Question 2 that you should commit to memory a list of your greatest and most recent achievements, ever ready on the tip of your tongue.

If you have such a list, it's easy to present any of your achievements in light of the quality the interviewer is asking about. For example, the smashing success you orchestrated at last year's trade show could be used as an example of creativity, or analytical ability, or your ability to manage.

Where could you use some improvement ?

Keep this answer, like all your answers, positive. A good way to answer this question is to identify a cutting-edge branch of your profession (one that's not essential to your employer's needs) as an area you're very excited about and want to explore more fully over the next six months.

What do you worry about ?

Redefine the word 'worry' so that it does not reflect negatively on you.

Example: "I wouldn't call it worry, but I am a strongly goal-oriented person. So I keep turning over in my mind anything that seems to be keeping me from achieving those goals, until I find a solution. That's part of my tenacity, I suppose."

I'm concerned that you don't have as much experience as we'd like in...
This question is related to "The Fatal Flaw" , but here the concern is not that you are totally missing some qualifications, such as CPA certification, but rather that your experience is light in one area.

Before going into any interview, try to identify the weakest aspects of your candidacy from this company's point of view. Then prepare the best answer you possible can to shore up your defenses.

To get past this question with flying colors, you are going to rely on your master strategy of uncovering the employer's greatest wants and needs and then matching them with your strengths. Since you already know how to do this from Question 1, you are in a much stronger position.

More specifically, when the interviewer poses as objection like this, you should...

Agree on the importance of this qualification.

Explain that your strength may be indeed be greater than your resume indicates because...

When this strength is added to your other strengths, it's really your combination of qualifications that's most important.

Then review the areas of your greatest strengths that match up most favorably with the company's most urgently-felt wants and needs.

This is powerful way to handle this question for two reasons. First, you're giving your interviewer more ammunition in the area of his concern. But more importantly, you're shifting his focus away from this one, isolated area and putting it on the unique

combination of strengths you offer, strengths which tie in perfectly with his greatest wants.

How do you feel about working nights and weekends ?
First, if you're a confirmed workaholic, this question is a softball lob. Whack it out of the park on the first swing by saying this kind of schedule is just your style. Add that your family understands it. Indeed, they're happy for you, as they know you get your greatest satisfaction from your work.

If however, you prefer a more balanced lifestyle, answer this question with another: "What's the norm for your best people here?"

If the hours still sound unrealistic for you, ask, "Do you have any top people who perform exceptionally for you, but who also have families and like to get home in time to see them at night?" Chances are this company does, and this associates you with this other "top-performers-who-leave-not-later-than-six" group.

Depending on the answer, be honest about how you would fit into the picture. If all those extra hours make you uncomfortable, say so, but phrase your response positively.

Example: "I love my work and do it exceptionally well. I think the results speak for themselves, especially in ...(mention your two or three qualifications of greater interest to the employer. Remember, this is what he wants most, not a workaholic with weak credentials). Not only would I bring these qualities, but I've built my whole career on working not just hard, but smart. I think you'll find me one of the most productive people here.

I do have a family who likes to see me after work and on weekends. They add balance and richness to my life, which in turn helps me be happy and productive at work. If I could handle some of the extra work at home in the evenings or on weekends, that would be ideal. You'd be getting a person of exceptional productivity who meets your needs with strong credentials. And I'd be able to handle some of the heavy workload at home where I can be under the same roof as my family. Everybody would win."

Are you willing to relocate or travel ?
First find out where you may have to relocate and how much travel may be involved.
Then respond to the question.
If there's no problem, say so enthusiastically.
If you do have a reservation, there are two schools of thought on how to handle it.
One advises you to keep your options open and your reservations to yourself in the early going, by saying, "no problem". You strategy here is to get the best offer you can, then make a judgment whether it's worth it to you to relocate or travel.
Also, by the time the offer comes through, you may have other offers and can make a more informed decision. Why kill of this opportunity before it has chance to blossom into something really special? And if you're a little more desperate three months from now, you might wish you hadn't slammed the door on relocating or traveling.
The second way to handle this question is to voice a reservation, but assert that you'd be

open to relocating (or traveling) for the right opportunity.
The answering strategy you choose depends on how eager you are for the job. If you want to take no chances, choose the first approach.
If you want to play a little harder-to-get in hopes of generating a more enticing offer, choose the second.

Do you have the stomach to fire people? Have you had experience firing many people ?
Describe the rational and sensible management process you follow in both hiring and firing.

Example: "My whole management approach is to hire the best people I can find, train them thoroughly and well, get them excited and proud to be part of our team, and then work with them to achieve our goals together. If you do all of that right, especially hiring the right people, I've found you don't have to fire very often.
"So with me, firing is a last resort. But when it's got to be done, it's got to be done, and the faster and cleaner, the better. A poor employee can wreak terrible damage in undermining the morale of an entire team of good people. When there's no other way, I've found it's better for all concerned to act decisively in getting rid of offenders who won't change their ways."

Why have you had so many jobs ?
First, before you even get to the interview stage, you should try to minimize your image as job hopper. If there are several entries on your resume of less than one year, consider eliminating the less important ones. Perhaps you can specify the time you spent at previous positions in rounded years not in months and years.
Example: Instead of showing three positions this way:
6/1982 – 3/1983, Position A;
4/1983 – 12/1983, Position B;
1/1984 – 8/1987, Position C;
…it would be better to show simply:
1982 – 1983, Position A;
1984 – 1987 Position C.
In other words, you would drop Position B altogether. Notice what a difference this makes in reducing your image as a job hopper.
Once in front of the interviewer and this question comes up, you must try to reassure him. Describe each position as part of an overall pattern of growth and career destination.
Be careful not to blame other people for your frequent changes. But you can and should attribute certain changes to conditions beyond your control.
Example: Thanks to an upcoming merger, you wanted to avoid an ensuing bloodbath, so you made a good, upward career move before your department came under the axe of the new owners.
If possible, also show that your job changes were more frequent in your younger days, while you were establishing yourself, rounding out your skills and looking for the right career path. At this stage in your career, you're certainly much more interested in the best long-term opportunity.

You might also cite the job where you stayed the longest and describe that this type of situation is what you're looking for now.

What do you see as the proper role/mission of...
...a good (job title you're seeking);
...a good manager;
...an executive in serving the community;
...a leading company in our industry; etc.

Think of the most essential ingredients of success for each category above – your job title, your role as manager, your firm's role, etc.
Identify at least three but no more than six qualities you feel are most important to success in each role. Then commit your response to memory.
Here, again, the more information you've already drawn out about the greatest wants and needs of the interviewer, and the more homework you've done to identify the culture of the firm, the more on-target your answer will be.

Would you lie for the company ?
Try to avoid choosing between two values, giving a positive statement which covers all bases instead.

Example: "I would never do anything to hurt the company.."

If aggressively pressed to choose between two competing values, always choose personal integrity. It is the most prized of all values.

Looking back, what would you do differently in your life ?
Indicate that you are a happy, fulfilled, optimistic person and that, in general, you wouldn't change a thing.

Example: "It's been a good life, rich in learning and experience, and the best it yet to come. Every experience in life is a lesson it its own way. I wouldn't change a thing."

Could you have done better in your last job ?
Again never be negative.

Example: "I suppose with the benefit of hindsight you can always find things to do better, of course, but off the top of my head, I can't think of anything of major consequence."

(If more explanation seems necessary)

Describer a situation that didn't suffer because of you but from external conditions beyond your control ?
For example, describe the disappointment you felt with a test campaign, new product launch, merger, etc., which looked promising at first, but led to underwhelming results. "I wish we could have known at the start what we later found out (about the economy turning, the marketplace changing, etc.), but since we couldn't, we just had to go for it. And we did learn from it..."

Can you work under pressure ?
Absolutely…(then prove it with a vivid example or two of a goal or project accomplished under severe pressure.)

What makes you angry ?
Give an answer that's suited to both your personality and the management style of the firm. Here, the homework you've done about the company and its style can help in your choice of words.

Examples: If you are a reserved person and/or the corporate culture is coolly professional:

"I'm an even-tempered and positive person by nature, and I believe this helps me a great deal in keeping my department running smoothly, harmoniously and with a genuine esprit de corps. I believe in communicating clearly what's expected, getting people's commitment to those goals, and then following up continuously to check progress."

"If anyone or anything is going off track, I want to know about it early. If, after that kind of open communication and follow up, someone isn't getting the job done, I'll want to know why. If there's no good reason, then I'll get impatient and angry…and take appropriate steps from there. But if you hire good people, motivate them to strive for excellence and then follow up constantly, it almost never gets to that state."

If you are feisty by nature and/or the position calls for a tough straw boss.

"You know what makes me angry? People who (the fill in the blanks with the most objectionable traits for this type of position)…people who don't pull their own weight, who are negative, people who lie…etc."

Why aren't you earning more money at this stage of your career ?
You like to make money, but other factors are even more important.

Example: "Making money is very important to me, and one reason I'm here is because I'm looking to make more. Throughout my career, what's been even more important to me is doing work I really like to do at the kind of company I like and respect.

(Then be prepared to be specific about what your ideal position and company would be like, matching them as closely as possible to the opportunity at hand.

Who has inspired you in your life and why?
Have a few heroes in mind, from your mental "Board of Directors" – Leaders in your industry, from history or anyone else who has been your mentor.

Be prepared to give examples of how their words, actions or teachings have helped inspire your achievements. As always, prepare an answer which highlights qualities that would be highly valuable in the position you are seeking.

What was the toughest decision you ever had to make?
Be prepared with a good example, explaining why the decision was difficult…the process you followed in reaching it…the courageous or effective way you carried it out…and the beneficial results.

Tell me about the most boring job you've ever had.

You have never allowed yourself to grow bored with a job and you can't understand it when others let themselves fall into that rut.

Example: "Perhaps I've been fortunate, but that I've never found myself bored with any job I have ever held. I've always enjoyed hard work. As with actors who feel there are no small parts, I also believe that in every company or department there are exciting challenges and intriguing problems crying out for energetic and enthusiastic solutions. If you're bored, it's probably because you're not challenging yourself to tackle those problems right under your nose."

Have you been absent from work more than a few days in any previous position?
If you have had no problem, emphasize your excellent and consistent attendance record throughout your career.

Also describe how important you believe such consistent attendance is for a key executive…why it's up to you to set an example of dedication…and why there's just no substitute for being there with your people to keep the operation running smoothly, answer questions and handle problems and crises as they arise.

If you do have a past attendance problem, you want to minimize it, making it clear that it was an exceptional circumstance and that it's cause has been corrected.

To do this, give the same answer as above but preface it with something like, "Other that being out last year (or whenever) because of (your reason, which is now in the past), I have never had a problem and have enjoyed an excellent attendance record throughout my career. Furthermore, I believe, consistent attendance is important because…" (Pick up the rest of the answer as outlined above.).

What changes would you make if you came on board?
You, of course, will want to take a good hard look at everything the company is doing before making any recommendations.

Example: "Well, I wouldn't be a very good doctor if I gave my diagnosis before the examination. Should you hire me, as I hope you will, I'd want to take a good hard look at everything you're doing and understand why it's being done that way. I'd like to have in-depth meetings with you and the other key people to get a deeper grasp of what you feel you're doing right and what could be improved.

"From what you've told me so far, the areas of greatest concern to you are…" (name them. Then do two things. First, ask if these are in fact his major concerns. If so then

reaffirm how your experience in meeting similar needs elsewhere might prove very helpful).

How many hours a week do you normally work?
If you are in fact a workaholic and you sense this company would like that: Say you are a confirmed workaholic, that you often work nights and weekends. Your family accepts this because it makes you fulfilled.

If you are not a workaholic: Say you have always worked hard and put in long hours. It goes with the territory. It one sense, it's hard to keep track of the hours because your work is a labor of love, you enjoy nothing more than solving problems. So you're almost always thinking about your work, including times when you're home, while shaving in the morning, while commuting, etc.

What's the most difficult part of being a (job title)?
First, redefine "difficult" to be "challenging" which is more positive. Then, identify an area everyone in your profession considers challenging and in which you excel. Describe the process you follow that enables you to get splendid results…and be specific about those results.

Example: "I think every sales manager finds it challenging to motivate the troops in a recession. But that's probably the strongest test of a top sales manager. I feel this is one area where I excel."

"When I see the first sign that sales may slip or that sales force motivation is flagging because of a downturn in the economy, here's the plan I put into action immediately…" (followed by a description of each step in the process…and most importantly, the exceptional results you've achieved.).

The "Hypothetical Problem"

Instead, describe the rational, methodical process you would follow in analyzing this problem, who you would consult with, generating possible solutions, choosing the best course of action, and monitoring the results.

Remember, in all such, "What would you do?" questions, always describe your process or working methods, and you'll never go wrong.

What was the toughest challenge you've ever faced?
This is an easy question if you're prepared. Have a recent example ready that demonstrates either:

A quality most important to the job at hand; or

A quality that is always in demand, such as leadership, initiative, managerial skill, persuasiveness, courage, persistence, intelligence, etc.

Have you consider starting your own business?
Again it's best to:

Gauge this company's corporate culture before answering and…

Be honest (which doesn't mean you have to vividly share your fantasy of the franchise or bed-and-breakfast you someday plan to open).

In general, if the corporate culture is that of a large, formal, military-style structure, minimize any indication that you'd love to have your own business. You might say, "Oh, I may have given it a thought once or twice, but my whole career has been in larger organizations. That's where I have excelled and where I want to be."

If the corporate culture is closer to the free-wheeling, everybody's-a-deal-maker variety, then emphasize that in a firm like this, you can virtually get the best of all worlds, the excitement of seeing your own ideas and plans take shape…combined with the resources and stability of a well-established organization. Sounds like the perfect environment to you.

In any case, no matter what the corporate culture, be sure to indicate that any desires about running your own show are part of your past, not your present or future.

The last thing you want to project is an image of either a dreamer who failed and is now settling for the corporate cocoon…or the restless maverick who will fly out the door with key accounts, contacts and trade secrets under his arms just as soon as his bankroll has gotten rebuilt.

Always remember: Match what you want with what the position offers. The more information you've uncovered about the position, the more believable you can make your case.

What are your goals?

Many executives in a position to hire you are strong believers in goal-setting. (It's one of the reason they've achieved so much). They like to hire in kind.

If you're vague about your career and personal goals, it could be a big turnoff to may people you will encounter in your job search.

Be ready to discuss your goals for each major area of your life: career, personal development and learning, family, physical (health), community service and (if your interviewer is clearly a religious person) you could briefly and generally allude to your spiritual goals (showing you are a well-rounded individual with your values in the right order).

Be prepared to describe each goal in terms of specific milestones you wish to accomplish along the way, time periods you're allotting for accomplishment, why the goal is important to you, and the specific steps you're taking to bring it about. But do this

concisely, as you never want to talk more than two minutes straight before letting your interviewer back into the conversation.

What do you for when you hire people?
Speak your own thoughts here, but for the best answer weave them around the three most important qualifications for any position.

Can the person do the work (qualifications)?

Will the person do the work (motivation)?

Will the person fit in ("our kind of team player")?

Sell me this stapler…(this pencil…this clock…or some other object on interviewer's desk).
Of course, you already know the most important secret of all great salesmanship – "find out what people want, then show them how to get it."

If your interviewer picks up his stapler and asks, "sell this to me," you are going to demonstrate this proven master principle. Here's how:

"Well, a good salesman must know both his product and his prospect before he sells anything. If I were selling this, I'd first get to know everything I could about it, all its features and benefits."

"Then, if my goal were to sell it you, I would do some research on how you might use a fine stapler like this. The best way to do that is by asking some questions. May I ask you a few questions?"

Then ask a few questions such as, "Just out of curiosity, if you didn't already have a stapler like this, why would you want one? And in addition to that? Any other reason? Anything else?"

"And would you want such a stapler to be reliable?...Hold a good supply of staples?" (Ask more questions that point to the features this stapler has.)

Once you've asked these questions, make your presentation citing all the features and benefits of this stapler and why it's exactly what the interviewer just told you he's looking for.

Then close with, "Just out of curiosity, what would you consider a reasonable price for a quality stapler like this…a stapler you could have right now and would (then repeat all the problems the stapler would solve for him)? Whatever he says, (unless it's zero), say, "Okay, we've got a deal."

NOTE: If your interviewer tests you by fighting every step of the way, denying that he even wants such an item, don't fight him. Take the product away from him by saying,

"Mr. Prospect, I'm delighted you've told me right upfront that there's no way you'd ever want this stapler. As you well know, the first rule of the most productive salespeople in any field is to meet the needs of people who really need and want our products, and it just wastes everyone's time if we try to force it on those who don't. And I certainly wouldn't want to waste your time. But we sell many items. Is there any product on this desk you would very much like to own…just one item?" When he points something out, repeat the process above. If he knows anything about selling, he may give you a standing ovation.

"The Salary Question" – How much money do you want ?

For maximum salary negotiating power, remember these five guidelines
Never bring up salary. Let the interviewer do it first. Good salespeople sell their products thoroughly before talking price. So should you. Make the interviewer want you first, and your bargaining position will be much stronger.

If your interviewer raises the salary question too early, before you've had a chance to create desire for your qualifications, postpone the question, saying something like, "Money is important to me, but is not my main concern. Opportunity and growth are far more important. What I'd rather do, if you don't mind, is explore if I'm right for the position, and then talk about money. Would that be okay?"

The #1 rule of any negotiation is: the side with more information wins. After you've done a thorough job of selling the interviewer and it's time to talk salary, the secret is to get the employer talking about what he's willing to pay before you reveal what you're willing to accept. So, when asked about salary, respond by asking, "I'm sure the company has already established a salary range for this position. Could you tell me what that is?" Or, "I want an income commensurate with my ability and qualifications. I trust you'll be fair with me. What does the position pay?" Or, more simply, "What does this position pay?"

Know beforehand what you'd accept. To know what's reasonable, research the job market and this position for any relevant salary information. Remember that most executives look for a 20-25%$ pay boost when they switch jobs. If you're grossly underpaid, you may want more.

Never lie about what you currently make, but feel free to include the estimated cost of all your fringes, which could well tack on 25-50% more to your present "cash-only" salary.

The Illegal Question

Illegal questions include any regarding your age…number and ages of your children or other dependents…marital status…maiden name…religion…political affiliation…ancestry…national origin…birthplace…naturalization of your parents, spouse or children…diseases…disabilities…clubs…or spouse's occupation…unless any of the above are directly related to your performance of the job. You can't even be asked about arrests, though you can be asked about convictions.

ANSWER: Under the ever-present threat of lawsuits, most interviewers are well aware of these taboos. Yet you may encounter, usually on a second or third interview, a senior

executive who doesn't interview much and forgets he can't ask such questions.

You can handle an illegal question in several ways. First, you can assert your legal right not to answer. But this will frighten or embarrass your interviewer and destroy any rapport you had.

Second, you could swallow your concerns over privacy and answer the question straight forwardly if you feel the answer could help you. For example, your interviewer, a devout Baptist, recognizes you from church and mentions it. Here, you could gain by talking about your church.

Third, if you don't want your privacy invaded, you can diplomatically answer the concern behind the question without answering the question itself.

Example: If you are over 50 and are asked, "How old are you?" you can answer with a friendly, smiling question of your own on whether there's a concern that your age my affect your performance. Follow this up by reassuring the interviewer that there's nothing in this job you can't do and, in fact, your age and experience are the most important advantages you offer the employer for the following reasons…

Another example: If asked, "Do you plan to have children?" you could answer, "I am wholeheartedly dedicated to my career", perhaps adding, "I have no plans regarding children." (You needn't fear you've pledged eternal childlessness. You have every right to change your plans later. Get the job first and then enjoy all your options.)

Most importantly, remember that illegal questions arise from fear that you won't perform well. The best answer of all is to get the job and perform brilliantly. All concerns and fears will then varnish, replaced by respect and appreciation for your work.

The "Secret" Illegal Question

Much more frequent than the Illegal question (see Question 55) is the secret illegal question. It's secret because it's asked only in the interviewer's mind. Since it's not even expressed to you, you have no way to respond to it, and it can there be most damaging.

Example: You're physically challenged, or a single mother returning to your professional career, or over 50, or a member of an ethnic minority, or fit any of a dozen other categories that do not strictly conform to the majority in a given company.

Your interviewer wonders, "Is this person really able to handle the job?"…"Is he or she a 'good fit' at a place like ours?"…"Will the chemistry ever be right with someone like this?" But the interviewer never raises such questions because they're illegal. So what can you do?

ANSWER: Remember that just because the interviewer doesn't ask an illegal question doesn't mean he doesn't have it. More than likely, he is going to come up with his own answer. So you might as well help him out.

How? Well, you obviously can't respond to an illegal question if he hasn't even asked.

This may well offend him. And there's always the chance he wasn't even concerned about the issue until you brought it up, and only then begins to wonder.

So you can't address "secret" illegal questions head-on. But what you can do is make sure there's enough counterbalancing information to more than reassure him that there's no problem in the area he may be doubtful about.

For example, let's say you're a sales rep who had polio as a child and you need a cane to walk. You know your condition has never impeded your performance, yet you're concerned that your interviewer may secretly be wondering about your stamina or ability to travel. Well, make sure that you hit these abilities very hard, leaving no doubt about your capacity to handle them well.

So, too, if you're in any different from what passes for "normal". Make sure, without in any way seeming defensive about yourself that you mention strengths, accomplishments, preferences and affiliations that strongly counterbalance any unspoken concern your interviewer may have.

What was the toughest part of your last job?

State that there was nothing in your prior position that you found overly difficult, and let your answer go at that. If pressed to expand your answer, you could describe the aspects of the position you enjoyed more than others, making sure that you express maximum enjoyment for those tasks most important to the open position, and you enjoyed least those tasks that are unimportant to the position at hand.

How do you define success…and how do you measure up to your own definition?

Give a well-accepted definition of success that leads right into your own stellar collection of achievements.

Example: "The best definition I've come across is that success is the progressive realization of a worthy goal."

"As to how I would measure up to that definition, I would consider myself both successful and fortunate…"(Then summarize your career goals and how your achievements have indeed represented a progressive path toward realization of your goals.)

"The Opinion Question" – What do you think about …Abortion…The President…The Death Penalty…(or any other controversial subject)?

In all of these instances, just remember the tale about student and the wise old rabbi. The scene is a seminary, where an overly serious student is pressing the rabbi to answer the ultimate questions of suffering, life and death. But no matter how hard he presses, the wise old rabbi will only answer each difficult question with a question of his own.

In exasperation, the seminary student demands, "Why, rabbi, do you always answer a question with another question?" To which the rabbi responds, "And why not?"

If you are ever uncomfortable with any question, asking a question in return is the greatest escape hatch ever invented. It throws the onus back on the other person, sidetracks the discussion from going into an area of risk to you, and gives you time to think of your answer or, even better, your next question!

In response to any of the "opinion" questions cited above, merely responding, "Why do you ask?" will usually be enough to dissipate any pressure to give your opinion. But if your interviewer again presses you for an opinion, you can ask another question.

Or you could assert a generality that almost everyone would agree with. For example, if your interviewer is complaining about politicians then suddenly turns to you and asks if you're a Republican or Democrat, you could respond by saying, "Actually, I'm finding it hard to find any politicians I like these days."

(Of course, your best question of all may be whether you want to work for someone opinionated.)

If you won $10 million lottery, would you still work?

This type of question is aimed at getting at your bedrock attitude about work and how you feel about what you do. Your best answer will focus on your positive feelings.

Example: "After I floated down from cloud nine, I think I would still hold my basic belief that achievement and purposeful work are essential to a happy, productive life. After all, if money alone bought happiness, then all rich people would be all happy, and that's not true.

"I love the work I do, and I think I'd always want to be involved in my career in some fashion. Winning the lottery would make it more fun because it would mean having more flexibility, more options…who knows?"

"Of course, since I can't count on winning, I'd just as soon create my own destiny by sticking with what's worked for me, meaning good old reliable hard work and a desire to achieve. I think those qualities have built many more fortunes that all the lotteries put together."

Looking back on your last position, have you done your best work?

To cover both possible paths this question can take, your answer should state that you always try to do your best, and the best of your career is right now. Like an athlete at the top of his game, you are just hitting your career stride thanks to several factors. Then, recap those factors, highlighting your strongest qualifications.

Why should I hire you from the outside when I could promote someone from within?

Help him see the qualifications that only you can offer.

Example: "In general, I think it's a good policy to hire from within – to look outside

probably means you're not completely comfortable choosing someone from inside.

"Naturally, you want this department to be as strong as it possibly can be, so you want the strongest candidate. I feel that I can fill that bill because…(then recap your strongest qualifications that match up with his greatest needs)."

Tell me something negative you've heard about our company…
Just remember the rule – never be negative – and you'll handle this one just fine.

On a scale of one to ten, rate me as an interviewer.
Once again, never be negative. The interviewer will only resent criticism coming from you. This is the time to show your positivism.

However, don't give a numerical rating. Simply praise whatever interview style he's been using.

If he's been tough, say "You have been thorough and tough-minded, the very qualities needed to conduct a good interview."

If he's been methodical, say, "You have been very methodical and analytical, and I'm sure that approach results in excellent hires for your firm."

In other words, pay him a sincere compliment that he can believe because it's anchored in the behavior you've just seen.

What to ask After The offer

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What to Ask After the Offer

All job hunters are waiting for that call -- the one that says they've landed the job. But as eager as you may be to escape either your current job or the unemployment ranks, don't abdicate your power position once the offer comes in. Now it's your turn to sit in the interviewer's seat and ask the company and yourself some tough questions -- the answers to which could mean the difference between career bliss and disaster.

Will the actual work and job responsibilities provide gratification, fulfillment and challenge?

This question is often overlooked, because applicants get hung up on job titles, salary and benefits. Try to get a clear sense of what an actual day would be like. What will you spend the majority of your time doing? Is the work in line with your values? Will you likely learn this job quickly and become bored and unchallenged?

What are the boss's strengths and weaknesses?

This question can be tough to answer, and it's best saved for after the job offer has been extended. You'll want to get a good idea for your potential boss's management style. Speak to your potential boss as much as possible to get a feel for his personality and what you can live with. Does he micromanage? Will you get consistent feedback and reviews? Does he make small talk, or is every conversation strictly business?

How much change is in the works at your prospective company, and what kind?

Constant change at work can mean constant stress. Find out if there are any big changes coming, such as new processing systems or management, impending retirements or adoption of new procedures that still need to be ironed out. At the same time, remember that some of these transitions will have less effect on your position than others.

How many of my skills and experiences will I be able to use and learn?

Make sure your unique skills and talents will be used and that training and promotion are open in the future. When you decide to move on, you'll want to have a new crop of experiences to sell to your next employer. Your goal is to perform well at work while constantly growing and learning.

How many people have held the position in the past several years?

Knowing how many people have been in your job and why they left can offer you great insights. You'll want to know if they were promoted or quit altogether. A steady stream of resignations may be a sign you could be reentering the job market soon.

While many of the reasons positions eventually become unfulfilling are unavoidable, such as hitting a plateau after repeatedly performing the same duties, job seekers should consider the ways a new position will advance them

Questions to ask to the HR

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Questions To Ask The HR

What kinds of assignments might I expect the first six months on the job?
How often are performance reviews given?
Please describe the duties of the job for me.
What products (or services) are in the development stage now?
Do you have plans for expansion?
What are your growth projections for next year?
Have you cut your staff in the last three years?
Are salary adjustments geared to the cost of living or job performance?
Does your company encourage further education?
How do you feel about creativity and individuality?
Do you offer flextime?
What is the usual promotional time frame?
Does your company offer either single or dual career-track programs?
What do you like best about your job/company?
Once the probation period is completed, how much authority will I have over decisions?
Has there been much turnover in this job area?
Do you fill positions from the outside or promote from within first?
Is your company environmentally conscious? In what ways?
In what ways is a career with your company better than one with your competitors?
Is this a new position or am I replacing someone?
What is the largest single problem facing your staff (department) now?
May I talk with the last person who held this position?
What qualities are you looking for in the candidate who fills this position?
What skills are especially important for someone in this position?
What characteristics do the achievers in this company seem to share?
Who was the last person that filled this position, what made them successful at it, where are they today, and how may I contact them?
Is there a lot of team/project work?
Will I have the opportunity to work on special projects?
Where does this position fit into the organizational structure?
How much travel, if any, is involved in this position?
What is the next course of action? When should I expect to hear from you or should I contact you?

Tips for the Interview

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Tips For HR Interview

Entering the room
Prior to the entering the door, adjust your attire so that it falls well.
Before entering enquire by saying, “May I come in sir/madam”.
If the door was closed before you entered, make sure you shut the door behind you softly.
Face the panel and confidently say ‘Good day sir/madam’.
If the members of the interview board want to shake hands, then offer a firm grip first maintaining eye contact and a smile.
Seek permission to sit down. If the interviewers are standing, wait for them to sit down first before sitting.
An alert interviewee would diffuse the tense situation with light-hearted humor and immediately set rapport with the interviewers.

Enthusiasm
The interviewer normally pays more attention if you display an enthusiasm in whatever you say.
This enthusiasm come across in the energetic way you put forward your ideas.
You should maintain a cheerful disposition throughout the interview, i.e. a pleasant countenance hold s the interviewers interest.

Humor
A little humor or wit thrown in the discussion occasionally enables the interviewers to look at the pleasant side of your personality,. If it does not come naturally do not contrive it.
By injecting humor in the situation doesn’t mean that you should keep telling jokes. It means to make a passing comment that, perhaps, makes the interviewer smile.

Eye contact
You must maintain eye contact with the panel, right through the interview. This shows your self-confidence and honesty.
Many interviewees while answering, tend to look away. This conveys you are concealing your own anxiety, fear and lack of confidence.
Maintaining an eye contact is a difficult process. As the circumstances in an interview are different, the value of eye contact is tremendous in making a personal impact.

Be natural
Many interviewees adopt a stance which is not their natural self.
It is amusing for interviewers when a candidate launches into an accent which he or she cannot sustain consistently through the interview or adopt mannerisms that are inconsistent with his/her personality.
Interviewers appreciate a natural person rather than an actor.
It is best for you to talk in natural manner because then you appear genuine.

Regards

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