Set-1

1. Three friends divided some bullets equally. After all of them shot 4 bullets the total number of bullets remaining is equal to the bullets each had after division. Find the original number divided.

2. Find sum of digits of D.

Let
$A = 1999^{1999}$
B = sum of digits of A
C = sum of digits of B
D = sum of digits of C

(HINT : $A = B = C = D \pmod 9$)

3. There is a 50m long army platoon marching ahead. The last person in the platoon wants to give a letter to the first person leading the platoon. So while the platoon is marching he runs ahead, reaches the first person and hands over the letter to him and without stopping he runs and comes back to his original position.

In the mean time the whole platoon has moved ahead by 50m.

The question is how much distance did the last person cover in that time. Assuming that he ran the whole distance with uniform speed.

4. If you take a marker & start from a corner on a cube, what is the maximum number of edges you can trace across if you never trace across the same edge twice, never remove the marker from the cube, & never trace anywhere on the cube, except for the corners & edges?

5. One of Mr. Bajaj, his wife, their son and Mr. Bajaj's mother is an Engineer and another is a Doctor.

- If the Doctor is a male, then the Engineer is a male.
- If the Engineer is younger than the Doctor, then the Engineer and the Doctor are not blood relatives.
- If the Engineer is a female, then she and the Doctor are blood relatives.

Can you tell who is the Doctor and the Engineer?

6. Three men - Sam, Cam and Laurie - are married to Carrie, Billy and Tina, but not necessarily in the same order.

Sam's wife and Billy's Husband play Carrie and Tina's husband at bridge. No wife partners her husband and Cam does not play bridge.

Who is married to Cam?

7. There are 3 persons X, Y and Z. On some day, X lent tractors to Y and Z as many as they had. After a month Y gave as many tractors to X and Z as many as they have. After a month Z did the same thing. At the end of this transaction each one of them had 24.

Find the tractors each originally had?

8. A certain street has 1000 buildings. A sign-maker is contracted to number the houses from 1 to 1000. How many zeroes will he need?

9. There are 9 coins. Out of which one is odd one i.e weight is less or more. How many iterations of weighing are required to find odd coin?

10. In a sports contest there were m medals awarded on n successive days (n > 1).

- On the first day 1 medal and 1/7 of the remaining m - 1 medals were awarded.
- On the second day 2 medals and 1/7 of the now remaining medals was awarded; and so on.
- On the n^{th} and last day, the remaining n medals were awarded.

How many days did the contest last, and how many medals were awarded altogether?

11. A number of 9 digits has the following properties:

- The number comprising the leftmost two digits is divisible by 2, that comprising the leftmost three digits is divisible by 3, the leftmost four by 4, the leftmost five by 5, and so on for the nine digits of the number i.e. the number formed from the first n digits is divisible by n, 2<=n<=9.
- Each digit in the number is different i.e. no digits are repeated.
- The digit 0 does not occur in the number i.e. it is comprised only of the digits 1-9 in some order.

Find the number.

12. 1/3 rd of the contents of a container evaporated on the 1st day. 3/4th of the remaining contents of the container evaporated on the second day.

What part of the contents of the container is left at the end of the second day?

13. Vipul was studying for his examinations and the lights went off. It was around 1:00 AM. He lighted two uniform candles of equal length but one thicker than the other. The thick candle is supposed to last six hours and the thin one two hours less. When he finally went to sleep, the thick candle was twice as long as the thin one.

For how long did Vipul study in candle light?

14. If you started a business in which you earned Rs.1 on the first day, Rs.3 on the second day, Rs.5 on the third day, Rs.7 on the fourth day, & so on.

How much would you have earned with this business after 50 years (assuming there are exactly 365 days in every year)?

15. A worker earns a 5% raise. A year later, the worker receives a 2.5% cut in pay, & now his salary is Rs. 22702.68

What was his salary to begin with?

16. At 6'o a clock ticks 6 times. The time between first and last ticks is 30 seconds. How long does it tick at 12'o.

17. 500 men are arranged in an array of 10 rows and 50 columns according to their heights.Tallest among each row of all are asked to come out. And the shortest among them is A.Similarly after resuming them to their original positions, the shortest among each column are asked to come out. And the tallest among them is B.

Now who is taller A or B ?

18. In Mr. Mehta's family, there are one grandfather, one grandmother, two fathers, two mothers, one father-in-law, one mother-in-law, four children, three grandchildren, one brother, two sisters, two sons, two daughters and one daughter-in-law.How many members are there in Mr. Mehta's family? Give minimal possible answer.

19. When Alexander the Great attacked the forces of Porus, an Indian soldier was captured by the Greeks. He had displayed such bravery in battle, however, that the enemy offered to let him choose how he wanted to be killed. They told him, "If you tell a lie, you will put to the sword, and if you tell the truth you will be hanged."

The soldier could make only one statement. He made that statement and went free. What did he say?

20. A person wanted to withdraw X rupees and Y paise from the bank. But cashier made a mistake and gave him Y rupees and X paise. Neither the person nor the cashier noticed that.

After spending 20 paise, the person counts the money. And to his surprise, he has double the amount he wanted to withdraw.

Find X and Y. (1 Rupee = 100 Paise)

21. The game of Tic-Tac-Toe is being played between two players. Only the last mark to be placed in the game as shown.

Who will win the game, O or X? Can you tell which was the sixth mark and at which position? Do explain your answer. At the Party:

- There were 9 men and children.
- There were 2 more women than children.
- The number of different man-woman couples possible was 24. Note that if there were 7 men and 5 women, then there would have been 35 man-woman couples possible.

  Also, of the three groups - men, women and children - at the party:
- There were 4 of one group.
- There were 6 of one group.
- There were 8 of one group.

Exactly one of the above 6 statements is false.

Can you tell which one is false? Also, how many men, women and children are there at the party Assume that both the players are intelligent enough.

22. The 7th mark must be placed in square 5 which is the win situation for both X and O. Hence, the 6th mark must be placed in a line already containing two of the opponents marks. There are two such possibilities - the 6th mark would have been either O in square 7 or X in square 9.

As we know both the players are intelligent enough, the 6th mark could not be O in square 7. Instead, he would have placed O in square 5 and would have won.

Hence, the sixth mark must be X placed in square 9. And the seventh mark will be O. Thus O will win the game.

23. There is a shortage of tubelights, bulbs and fans in a village - Kharghar. It is found that

- All houses do not have either tubelight or bulb or fan.
- exactly 19% of houses do not have just one of these.
- atleast 67% of houses do not have tubelights.
- atleast 83% of houses do not have bulbs.
- atleast 73% of houses do not have fans.

What percentage of houses do not have tubelight, bulb and fan?

24. Mr. Subramaniam rents a private car for Andheri-Colaba-Andheri trip. It costs him Rs. 300 everyday.

One day the car driver informed Mr. Subramaniam that there were two students from Bandra who wished to go from Bandra to Colaba and back to Bandra. Bandra is halfway between Andheri and Colaba. Mr. Subramaniam asked the driver to let the students travel with him.

On the first day when they came, Mr. Subramaniam said, "If you tell me the mathematically correct price you should pay individually for your portion of the trip, I will let you travel for free."

How much should the individual student pay for their journey?

27. At what time after 4.00 p.m. is the minutes hand of a clock exactly aligned with the hour hand?

28. A soldier looses his way in a thick jungle. At random he walks from his camp but mathematically in an interesting fashion.

First he walks one mile East then half mile to North. Then 1/4 mile to West, then 1/8 mile to South and so on making a loop.

Finally how far he is from his camp and in which direction?

29. Raj has a jewel chest containing Rings, Pins and Ear-rings. The chest contains 26 pieces. Raj has 2 1/2 times as many rings as pins, and the number of pairs of earrings is 4 less than the number of rings.

How many earrings does Raj have?

30. How many ways are there of arranging the sixteen black or white pieces of a standard international chess set on the first two rows of the board?

Given that each pawn is identical and each rook, knight and bishop is identical to its pair.

31. A person with some money spends 1/3 for cloths, 1/5 of the remaining for food and 1/4 of the remaining for travel. He is left with Rs 100/-

How much did he have with him in the begining?

32. Grass in lawn grows equally thick and in a uniform rate. It takes 24 days for 70 cows and 60 days for 30 cows to eat the whole of the grass.

How many cows are needed to eat the grass in 96 days?

33. There is a safe with a 5 digit number as the key. The 4th digit is 4 greater than the second digit, while the 3rd digit is 3 less than the 2nd digit. The 1st digit is thrice the last digit. There are 3 pairs whose sum is 11.

Find the number.

34. Four friends - Arjan, Bhuvan, Guran and Lakha were comparing the number of sheep that they owned.

It was found that Guran had ten more sheep than Lakha.

If Arjan gave one-third to Bhuvan, and Bhuvan gave a quarter of what he then held to Guran, who then passed on a fifth of his holding to Lakha, they would all have an equal number of sheep.

How many sheep did each of them possess? Give the minimal possible answer

35. Consider a number 235, where last digit is the sum of first two digits i.e. 2 + 3 = 5.

How many such 3-digit numbers are there?

36. Find the smallest number such that if its rightmost digit is placed at its left end, the new number so formed is precisely 50% larger than the original number.

37. Two identical pack of cards A and B are shuffled throughly. One card is picked from A and shuffled with B. The top card from pack A is turned up. If this is the Queen of Hearts, what are the chances that the top card in B will be the King of Hearts?

38. There are 3 ants at 3 corners of a triangle, they randomly start moving towards another corner.

What is the probability that they don't collide?

39. Find all sets of consecutive integers that add up to 1000.

40. There is a 4-character code, with 2 of them being letters and the other 2 being numbers.

How many maximum attempts would be necessary to find the correct code? Note that the code is case-sensitive.

41. How many possible combinations are there in a 3x3x3 rubics cube?

In other words, if you wanted to solve the rubics cube by trying different combinations, how many might it take you (worst case senerio)?

How many for a 4x4x4 cube?

43. One of the four people - Mr. Clinton, his wife Monika, their son Mandy and their daughter Cindy - is a singer and another is a dancer. Mr. Clinton is older than his wife and Mady is older than his sister.

1. If the singer and the dancer are the same sex, then the dancer is older than the singer.
2. If neither the singer nor the dancer is the parent of the other, then the singer is older than the dancer.
3. If the singer is a man, then the singer and the dancer are the same age.
4. If the singer and the dancer are of opposite sex then the man is older than the woman.
5. If the dancer is a woman, then the dancer is older than the singer.

Whose occupation do you know? And what is his/her occupation?

Set-2

1.**CASE I** : Singer is a woman and Dancer is also a woman
Then, the dancer is Monika and the singer is Cindy.

CASE II : Singer is a woman and Dancer is also a man
Then, the dancer is Mr. Clinton and the singer is Cindy.

In both the cases, we know that Cindy is the Singer. And either Mr. Clinton or Monika is the Dancer.

There are 20 people in your applicant pool, including 5 pairs of identical twins.

If you hire 5 people randomly, what are the chances you will hire at least 1 pair of identical twins? (Needless to say, this could cause trouble ;))
Submitted

2. In a hotel, rooms are numbered from 101 to 550. A room is chosen at random. What is the probability that room number starts with 1, 2 or 3 and ends with 4, 5 or 6?

3. There are 3 persons X, Y and Z. On some day, X lent tractors to Y and Z as many as they had. After a month Y gave as many tractors to X and Z as many as they have. After a month Z did the same thing. At the end of this transaction each one of them had 24.

Find the tractors each originally had?

4. There is a 50m long army platoon marching ahead. The last person in the platoon wants to give a letter to the first person leading the platoon. So while the platoon is marching he runs ahead, reaches the first person and hands over the letter to him and without stopping he runs and comes back to his original position.

In the mean time the whole platoon has moved ahead by 50m.

The question is how much distance did the last person cover in that time. Assuming that he ran the whole distance with uniform speed.
Submitted

5. Assume that you have enough coins of 1, 5, 10, 25 and 50 cents.

How many ways are there to make change for a dollar? Do explain your answer.

6. In a Road Race, one of the three bikers was doing 15km less than the first and 3km more than the third. He also finished the race 12 minutes after the first and 3 minutes before the third.

Can you find out the speed of each biker, the time taken by each biker to finish the race and the length of the course?

Assume that there were no stops in the race and also they were driving with constant speeds throughout the race.

7. What is the four-digit number in which the first digit is 1/3 of the second, the third is the sum of the first and second, and the last is three times the second?

8. Difference between Bholu's and Molu's age is 2 years and the difference between Molu's and Kolu's age is 5 years.

What is the maximum possible value of the sum of the difference in their ages, taken two at a time?

9. If it is given that:
25 - 2 = 3
100 x 2 = 20
36 / 3 = 2

What is 144 - 3 = ?

10. A 3 digit number is such that it's unit digit is equal to the product of the other two digits which are prime. Also, the difference between it's reverse and itself is 396.

What is the sum of the three digits?

11. There are 4 mugs placed upturned on the table. Each mug have the same number of marbles and a statement about the number of marbles in it. The statements are: Two or Three, One or Four, Three or One, One or Two.

Only one of the statement is correct. How many marbles are there under each mug?

12. At University of Probability, there are 375 freshmen, 293 sophomores, 187 juniors, & 126 seniors. One student will randomly be chosen to receive an award.

What percent chance is there that it will be a junior? Round to the nearest whole percent

13. If you were to dial any 7 digits on a telephone in random order, what is the probability that you will dial your own phone number?

Assume that your telephone number is 7-digits.

14. An anthropologist discovers an isolated tribe whose written alphabet contains only six letters (call the letters A, B, C, D, E and F). The tribe has a taboo against using the same letter twice in the same word. It's never done.

If each different sequence of letters constitues a different word in the language, what is the maximum number of six-letter words that the language can employ?

15. Kate, Demi, Madona, Sharon, Britney and Nicole decided to lunch together in a restaurant. The waiter led them to a round table with six chairs.

How many different ways can they seat?

16. 3 blocks are chosen randomly on a chessboard. What is the probability that they are in the same diagonal?

17. What is the area of the triangle ABC with A(e,p) B(2e,3p) and C(3e,5p)?

where p = PI (3.141592654)

18. Silu and Meenu were walking on the road.

Silu said, "I weigh 51 Kgs. How much do you weigh?"

Meenu replied that she wouldn't reveal her weight directly as she is overweight. But she said, "I weigh 29 Kgs plus half of my weight."

How much does Meenu weigh?

19. Consider the sum: ABC + DEF + GHI = JJJ

If different letters represent different digits, and there are no leading zeros, what does J represent?

20. A man has Ten Horses and nine stables as shown here.

[ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]

The man wants to fit Ten Horses into nine stables. How can he fit Ten horses into nine stables?

21. A man is at a river with a 9 gallon bucket and a 4 gallon bucket. He needs exactly 6 gallons of water.

How can he use both buckets to get exactly 6 gallons of water?

Note that he cannot estimate by dumping some of the water out of the 9 gallon bucket or the 4 gallon bucket

23. There are 9 coins. Out of which one is odd one i.e weight is less or more. How many iterations of weighing are required to find odd coin?

24. In a sports contest there were m medals awarded on n successive days (n > 1).

1. On the first day 1 medal and 1/7 of the remaining m - 1 medals were awarded.
2. On the second day 2 medals and 1/7 of the now remaining medals was awarded; and so on.
3. On the n^{th} and last day, the remaining n medals were awarded.

How many days did the contest last, and how many medals were awarded altogether?

25. A number of 9 digits has the following properties:

- The number comprising the leftmost two digits is divisible by 2, that comprising the leftmost three digits is divisible by 3, the leftmost four by 4, the leftmost five by 5, and so on for the nine digits of the number i.e. the number formed from the first n digits is divisible by n, 2<=n<=9.
- Each digit in the number is different i.e. no digits are repeated.
- The digit 0 does not occur in the number i.e. it is comprised only of the digits 1-9 in some order.

Find the number.

26. 1/3 rd of the contents of a container evaporated on the 1st day. 3/4th of the remaining contents of the container evaporated on the second day.

What part of the contents of the container is left at the end of the second day?

27. There are four people in a room (not including you). Exactly two of these four always tell the truth. The other two always lie.

You have to figure out who is who IN ONLY 2 QUESTIONS. Your questions have to be YES or NO questions and can only be answered by one person. (If you ask the same question to two different people then that counts as two questions). Keep in mind that all four know each other's characteristics whether they lie or not.

What questions would you ask to figure out who is who? Remember that you can ask only 2 questions.

You have 3 baskets, & each one contains exactly 4 balls, each of which is of the same size. Each ball is either red, black, white, or purple, & there is one of each color in each basket.

If you were blindfolded, & lightly shook each basket so that the balls would be randomly distributed, & then took 1 ball from each basket, what chance is there that you would have exactly 2 red balls?

28. Consider a state lottery where you get to choose 8 numbers from 1 to 80, no repetiton allowed. The Lottery Commission chooses 11 from those 80 numbers, again no repetition. You win the lottery if atleast 7 of your numbers are there in the 11 chosen by the Lottery Commission.

What is the probablity of winning the lottery?

29. To move a Safe, two cylindrical steel bars 7 inches in diameter are used as rollers.

How far will the safe have moved forward when the rollers have made one revolution?

30.If a rook and a bishop of a standard chess set are randomly placed on a chessboard, what is the probability that one is attacking the other?

Note that both are different colored pieces.

31. Here in England McDonald's has just launched a new advertising campaign. The poster shows 8 McDonald's products and underneath claims there are 40312 combinations of the above items.

Given that the maximum number of items allowed is 8, and you are allowed to have less than 8 items, and that the order of purchase does not matter (i.e. buying a burger and fries is the same as buying fries and a burger)

How many possible combinations are there? Are McDonald's correct in claiming there are 40312 combinations?

32. What are the chances that at least two out of a group of fifty people share the same birthday?

33. A tank can be filled by pipe A in 30 minutes and by pipe B in 24 minutes. Outlet pipe C can empty the full tank in X minutes.

If the tank is empty initially and if all the three pipes A, B and C are opened simultaneously, the tank will NEVER be full. Give the maximal possible value of X.

34. A worker earns a 5% raise. A year later, the worker receives a 2.5% cut in pay, & now his salary is Rs. 22702.68

What was his salary to begin with?

35. A person wanted to withdraw X rupees and Y paise from the bank. But cashier made a mistake and gave him Y rupees and X paise. Neither the person nor the cashier noticed that.

After spending 20 paise, the person counts the money. And to his surprise, he has double the amount he wanted to withdraw.

Find X and Y. (1 Rupee = 100 Paise)

36.At the Party:

1. There were 9 men and children.
2. There were 2 more women than children.
3. The number of different man-woman couples possible was 24. Note that if there were 7 men and 5 women, then there would have been 35 man-woman couples possible.

Also, of the three groups - men, women and children - at the party:

4. There were 4 of one group.
5. There were 6 of one group.
6. There were 8 of one group.

Exactly one of the above 6 statements is false.

Can you tell which one is false? Also, how many men, women and children are there at the party?

37. Brain Teaser No : 00242

There is a shortage of tubelights, bulbs and fans in a village - Kharghar. It is found that

- All houses do not have either tubelight or bulb or fan.
- exactly 19% of houses do not have just one of these.
- atleast 67% of houses do not have tubelights.
- atleast 83% of houses do not have bulbs.
- atleast 73% of houses do not have fans.

What percentage of houses do not have tubelight, bulb and fan?

38. What is the remainder left after dividing 1! + 2! + 3! + + 100! By 7?

Think carefully !!!

39. Imagine that you have 26 constants, labelled A through Z. Each constant is assigned a value in the following way: A = 1; the rest of the values equal their position in the alphabet (B corresponds to the second position so it equals 2, C = 3, etc.) raised to the power of the preceeding constant value. So, B = 2 ^ (A's value), or B = 2^1 = 2. C = 3^2 = 9. D = 4^9, etc.

Find the exact numerical value to the following equation: (X - A) * (X - B) * (X - C) * ... * (X - Y) * (X - Z)

40. If three babies are born every second of the day, then how many babies will be born in the year 2001?

41. Replace the letters with the correct numbers.

```
   T W O

X  T W O

---------

T H R E E
```

42. Brain Teaser No : 00052

Four words add up to a fifth word numerically:

```
   mars

  venus

 uranus

 saturn

-------- +

 neptune
```

Each of the ten letters (m, a, r, s, v, e, n, u, t, and p) represent a unique number from the range 0 .. 9.

Furthermore, numbers 1 and 6 are being used most frequently.

Puzzles for JOB hunters part-3

1. There are 4 army men. They have been captured by a rebel group and have been held at ransom. An army intelligent officer orders them to be burried deep in dirt up to their necks. The format of their burrial are as shown in the

figure.

Conditions

- They each have hats on their heads. either black(b) or white (w) look at diagram above. There are total 2 white hats and 2 black hats.
- They only look in front of them not behind. They are not allowed to communicate by talking.
- Between army man 1 and 2, there is a wall.
- Captive man 4 can see the colour of hats on 2 and 3
- 3 can only see 2's hat
- 2 can only see a wall and 1 can see a wall too, but is on the other side

The officer speaks up, "If one of you can correctly tell me the colour of your hat, you will all go scott free back to your contries. If you are wrong, you will all be killed.

How can one of them be certain about the hat they are wearing and not risk the lives of their fellow souldiers by taking a 50/50 guess!

2. One side of the bottom layer of a triangular pyramid has 12 balls. How many are there in the whole pyramid?

Note that the pyramid is equilateral and solid.

3. A blindfolded man is asked to sit in the front of a carrom board. The holes of the board are shut with lids in random order, i.e. any number of all the four holes can be shut or open.

Now the man is supposed to touch any two holes at a time and can do the following.

- Open the closed hole.
- Close the open hole.
- Let the hole be as it is.

After he has done it, the carrom board is rotated and again brought to some position. The man is again not aware of what are the holes which are open or closed.

How many minimum number of turns does the blindfolded man require to either open all the holes or close all the holes?

Note that whenever all the holes are either open or close, there will be an alarm so that the blindfolded man will know that he has won.

4. In the middle of the confounded desert, there is the lost city of "Ash". To reach it, I will have to travel overland by foot from the coast. On a trek like this, each person can only carry enough rations for five days and the farthest we can travel in one day is 30 miles. Also, the city is 120 miles from the starting point.

What I am trying to figure out is the fewest number of persons, including myself, that I will need in our Group so that I can reach the city, stay overnight, and then return to the coast without running out of supplies.

How many persons (including myself) will I need to accomplish this mission?

5. At what time after 4.00 p.m. is the minutes hand of a clock exactly aligned with the hour hand?

6. Note that the leftmost letter can't be zero in any word. Also, there must be a one-to-one mapping between digits and letters. e.g. if you substitute 3 for the letter M, no other letter can be 3 and all other M in the puzzle must be 3.

7. Brain Teaser No : 00015

In the town called Alibaug, the following facts are true:

- No two inhabitants have exactly the same number of hairs.

- No inhabitants has exactly 2025 hairs.
- There are more inhabitants than there are hairs on the head of any one inhabitants.

What is the largest possible number of the inhabitants of Alibaug?

8. There are four groups of Mangoes, Apples and Bananas as follows:
Group I : 1 Mango, 1 Apples and 1 Banana
Group II : 1 Mango, 5 Apples and 7 Bananas
Group III : 1 Mango, 7 Apples and 10 Bananas
Group IV : 9 Mango, 23 Apples and 30 Bananas

Group II costs Rs 300 and Group III costs Rs 390.

Can you tell how much does Group I and Group IV cost?

9. Tic-Tac-Toe is being played. One 'X' has been placed in one of the corners. No 'O' has been placed yet.

Where does the player that is playing 'O' has to put his first 'O' so that 'X' doesn't win?

Assume that both players are very intelligent. Explain your answer

10. Amit, Bhavin, Himanshu and Rakesh are sitting around a table.

- The Electonics Engineer is sitting to the left of the Mechanical Engineer.
- Amit is sitting opposite to Computer Engineer.
- Himanshu likes to play Computer Games.
- Bhavin is sitting to the right of the Chemical Engineer.

Can you figure out everyone's profession?

11. Five friends with surname Batliwala, Pocketwala, Talawala, Chunawala and Natakwala have their first name and middle name as follow.

1. Four of them have a first and middle name of Paresh.
2. Three of them have a first and middle name of Kamlesh.
3. Two of them have a first and middle name of Naresh.
4. One of them have a first and middle name of Elesh.
5. Pocketwala and Talawala, either both are named Kamlesh or neither is named Kamlesh.
6. Either Batliwala and Pocketwala both are named Naresh or Talawala and Chunawala both are named Naresh.
7. Chunawala and Natakwala are not both named Paresh.

Who is named Elesh?

12. Mr. Wagle goes to work by a bus. One day he falls asleep when the bus still has twice as far to go as it has already gone.

Halfway through the trip he wakes up as the bus bounces over some bad potholes. When he finally falls asleep again, the bus still has half the distance to go that it has already travelled. Fortunately, Mr. Wagle wakes up at the end of his trip.

What portion of the total trip did Mr. Wagle sleep?

13. Brain Teaser No : 00068

In your sock drawer, you have a ratio of 5 pairs of blue socks, 4 pairs of brown socks, and 6 pairs of black socks.

In complete darkness, how many socks would you need to pull out to get a matching pair of the same color?

14. You have a bucket of jelly beans. Some are red, some are blue, and some green. With your eyes closed, pick out 2 of a like color.

How many do you have to grab to be sure you have 2 of the same?

15. There are 70 employees working with BrainVista of which 30 are females. Also,

- 30 employees are married
- 24 employees are above 25 years of age
- 19 married employees are above 25 years, of which 7 are males
- 12 males are above 25 years of age
- 15 males are married.

How many unmarried females are there and how many of them are above 25?

16. There is a safe with a 5 digit number as the key. The 4th digit is 4 greater than the second digit, while the 3rd digit is 3 less than the 2nd digit. The 1st digit is thrice the last digit. There are 3 pairs whose sum is 11.

Find the number.

17. My friend collects antique stamps. She purchased two, but found that she needed to raise money urgently. So she sold them for Rs. 8000 each. On one she made 20% and on the other she lost 20%.

How much did she gain or lose in the entire transaction?

18. Assume for a moment that the earth is a perfectly uniform sphere of radius 6400 km. Suppose a thread equal to the length of the circumference of the earth was placed along the equator, and drawn to a tight fit.

Now suppose that the length of the thread is increased by 12 cm, and that it is pulled away uniformly in all directions.

By how many cm. will the thread be separated from the earth's surface?

19.Scientist decided to do a study on the population growth of rabbits. Inside a controlled environment, 1000 rabbits were placed.

Six months later, there were 1000Z rabbits. At the beginning of the 3rd year, there were roughly 2828Z rabbits, which was 4 times what the scientists placed in there at the beginning of the 1st year.

If Z is a positive variable, how many rabbits would be there at the beginning of the 11th year?

20. A class of 100 students. 24 of them are girls and 32 are not. Which base am I using?

21. A man is stranded on a desert island. All he has to drink is a 20oz bottle of sprite.

To conserve his drink he decides that on the first day he will drink one oz and the refill the bottle back up with water. On the 2nd day he will drink 2oz and refill the bottle. On the 3rd day he will drink 3oz and so on...

By the time all the sprite is gone, how much water has he drunk?

22. You have four 9's and you may use any of the (+, -, /, *) as many times as you like. I want to see a mathematical expression which uses the four 9's to = 100

How many such expressions can you make?

23. 12 members were present at a board meeting. Each member shook hands with all of the other members before & after the meeting.

How many hand shakes were there?

24. Arrange five planets such that 4 of them add up to 5th planet numerically. Each of the letters of the planet should represent a unique number from the range 0 - 9. You have to use all ten digits.

There is an amazing mathematical relationship exists among the names of the planet.

25. You have 14 apples. Your Friend Marge takes away 3 and gives you 2. You drop 7 but pick up 4. Bret takes 4 and gives 5. You take one from Marge and give it to Bret in exchange for 3 more. You give those 3 to Marge and she gives you an apple and an orange. Frank comes and takes the apple Marge gave you and gives you a pear. You give the pear to Bret in exchange for an apple. Frank then takes an apple from Marge, gives it to Bret for an orange, gives you the orange for an apple.

How many pears do you have?

26. Four couples are going to the movie. Each row holds eight seats. Betty and Jim don't want to sit next to Alice and Tom. Alice and Tom don't want to sit next to Gertrude and Bill. On the otherhand, Sally and Bob don't want to sit next to Betty and Jim.

How can the couples arrange themselves in a row so that they all sit where they would like?

27. Substitute digits for the letters to make the following addition problem true.

```
    W H O S E

    T E E T H

      A R E

+       A S

-------------------

  S W O R D S
```

Note that the leftmost letter can't be zero in any word. Also, there must be a one-to-one mapping between digits and letters. e.g. if you substitute 3 for the letter H, no other letter can be 3 and all other H in the puzzle must be 3.

28. When Socrates was imprisoned for being a disturbing influence, he was held in high esteem by his guards. All four of them hoped that something would occur that would facilitate his escape. One evening, the guard who was on duty intentionally left the cell door open so that Socrates could leave for distant parts.

Socrates did not attempt to escape, as it was his philosophy that if you accept society's rules, you must also accept it's punishments. However, the open door was considered by the authorities to be a serious matter. It was not clear which guard was on that evening. The four guards make the following statements in their defense:

Aaron:
A) I did not leave the door open.
B) Clement was the one who did it.

Bob:
A) I was not the one who was on duty that evening.
B) Aaron was on duty.

Clement:
A) Bob was the one on duty that evening.
B) I hoped Socrates would escape.

David:
A) I did not leave the door open.
B) I was not surprised that Socrates did not attempt to escape.

Considering that, in total, three statements are true, and five statements are false, which guard is guilty

ser No : 00474

/ whole number take the sum of the digits, and the product of the digits, and multiply these together to get ole number.

ple, starting with 6712, the sum of the digits is (6+7+1+2) = 16, and the product of the digits is (6*7*1*2) = nswer in this case is then 84 x 16 = 1344.

nis again starting from 1344, we get (1+3+4+4) * (1*3*4*4) = 576

gain (5+7+6) * (5*7*6) = 3780

ge we know what the next answer will be (without working it out) because, as one digit is 0, the product of will be 0, and hence the answer will also be 0.

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29. There were N stations on a railroad. After adding X stations 46 additional tickets have to be printed.

Find N and X.

30. An emergency vehicle travels 10 miles at a speed of 50 miles per hour.

How fast must the vehicle travel on the return trip if the round-trip travel time is to be 20 minutes?

31. All of the students at a college are majoring in psychology, business, or both. 73% of the students are psychology majors, & 62% are business majors.

If there are 200 students, how many of them are majoring in both psychology & business?

32. Two trains starting at same time, one from Bangalore to Mysore and other in opposite direction arrive at their destination 1hr and 4hrs respectively after passing each other.

33. Mrs. Watsherface had a garage sale. A custmer named Gina bought an old lamp and a rug. She paid a total of $5.25 for everything. The rug cost 25 cents more than the lamp.

How much did each cost?

34. Write 1111.....(243 times) i.e. a 243 digit number with all 1s.

Prove that it is divisible by 243.

35. Karan bought a little box of midget matches, each one inch in length. He found that he could arrange them all in the form of a triangle whose area was just as many square inches as there were matches.

He then used up six of the matches, and found that with the remainder he could again construct another triangle whose area was just as many square inches as there were matches.

And using another six matches he could again do precisely the same.

How many matches were there in the box originally?

Note that the match-box can hold maximum of 50 matches.

36. Find the values of each of the alphabets.

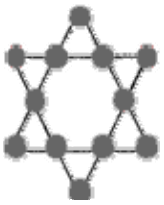
```
  N O O N

  S O O N

+ M O O N

----------

  J U N E
```



37. We have to fill number from 1 to 12 at the intersection point of two or more lines. We have to construct a star using two triangle. The sum of all number lying in straight lines should be same. This can be easilty understood by the fig. and hence solved.
Submitted by : Vaibhav Gupta

38. Montu, Bantu, Chantu and Pintu have pets.

Montu says, "If Pintu and I each have a dog, then exactly one of Bantu and Chantu has a dog."

Bantu says, "If Chantu and I each have a cat, then exactly one of Montu and Pintu has a dog."

Chantu says, "If Montu and I each have a dog, then exactly one of Bantu and Pintu has a cat."

Pintu says, "If Bantu and I each have a cat, then exactly one of Bantu and I has a dog."

Only one of the four is telling the truth. Who is telling the truth?

39. Somebody marked the six faces of a die with the numbers 1, 2 and 3 - each number twice. The die was put on a table. Four people - Abu, Babu, Calu and Dabu - sat around the table so that each one was able to see only three sides of the die at a glance.

- Abu sees the number 1 and two even numbers.
- Babu and Calu can see three different numbers each.
- Dabu sees number 2 twice and he can't remember the third number.

What number is face down on the table?

Puzzles for JOB hunters part-6

1. It is given that on every 6th day beareats 45 pounds of fish i.e. on day number 6, 12, 18, 24, ... 192, 198 the bear eats 45 pounds of fish.

Total number of 6th days = 200/6 = 33 (the bear eats 45 pounds)
Hence, the normal days are = 200 - 33 = 167 (the bear eats 65 pounds)

Thus, in 200 days, the bear will eat
= (167) * (65) + (33) * (45)
= 10855 + 1485
= 12,340 pounds

You have 3 points labelled A, B and C. You then have another 3 points labelled 1, 2 and 3. The aim of the puzzle is to connect point A with point 1, 2 and 3. Point B with point 1, 2 and 3 and point C with point 1, 2 and 3.

Now while connecting the points you have to follow one rule - the lines cannot cross over each other.

A B C

1 2 3

PS : You can arrange the points in order as long as the lines DO NOT cross over each other.

2.

ser No : 00477

five bales of hay are weighed two at a time in all possible ways. The weights in pounds are 110, 112, 113, 116, 117, 118, 120, and 121.

h does each bale weigh?
l by : Travis Lara

3.
Pinto says, "The horse is not Black."
Sandy says, "The horse is either Brown or Grey."
Andy says, "The horse is Brown."

At least one is telling truth and at least one is lying.

Can you tell the color of the horse?

4.

Brain Teaser No : 00258

Three convicts are brought into the warden's office. He says he can parole one of them and to decide which one he will parole he takes out 5 hats (3 red and 2 white). He stands behind them and places a hat on each one of their heads and puts the other two remaining hats in a drawer.

He tells the prisioners they can look at the others hats and if they can tell which hat they have on they will be the one who is paroled.

The first man looks at the other two and says, "I don't know."

The second man looks at the others hats and says, "I don't know."

The third man who is blind says, "Even though I have not the gift of sight I can tell by what the others have said that the color of my hat is..."

What color is the blind mans hat and how does he know?

5.

Three Gold (G) coins, three Silver (S) coins and three Copper (C) coins are arranged in a single row as follow:

G S C G S C G S C

- Only 2 adjacent unlike coins can be moved at any one time.
- The moved coins must be in contact with at least one other coin in line. i.e. no pair of coins is to be moved and placed away from the remaining ones.
- No coin pairs can be reversed i.e. a S-C combination must remain in that order in its new positionwhen it is moved.

What is the minimum number of moves required to get all the coins in following order?

C C C S S S G G G

Show all moves.

6. A fly is flying between two trains, each travelling towards each other on the same track at 60 km/h. The fly reaches one engine, reverses itself immediately, and flies back to the other engine, repeating the process each time.

The fly is flying at 90 km/h. If the fly flies 180 km before the trains meet, how far apart were the trains initially?

7. What is the minimum number of numbers needed to form every number from 1 to 7,000?

Example: To form 4884, you would need 2 4s & 2 8s. 4822 requires a 4, a 8, & 2 2s, but you would not count the numbers again that you had already counted from making 4884.

8. A drinks machine offers three selections - Tea, Coffee or Random (Either tea or Coffee) but the machine has been wired up wrongly so that each button does not give what it claims.

If each drink costs 50p, how much minimum money do you have to put into the machine to work out which button gives which selection?
Submitted

9. You have 13 balls which all look identical. All the balls are the same weight except for one. Using only a balance scale, can find the odd one out with only 3 weighings?

Is it possible to always tell if the odd one out is heavier or lighter than the other balls?
Submitted by : Brett Hurrell

10. How many squares are there in a 5 inch by 5 inch square grid? Note that the grid is made up of one inch by one inch squares.
Submitted by : Kristin Monroe

11. Five horses ran in the race.

- There were no ties.
- Sikandar did not come first.
- Star was neither first nor last.
- Mughal Glory came in one place after Sikandar.
- Zozo was not second.
- Rangila was two place below Zozo.

In what order did the horses finish?

12. If you added together the number of 2's in each of the following sets of numbers, which set would contain the most 2's: 1-333, 334-666, or 667-999?

13. If one person sends the e-mail to two friends, asking each of them to copy the mail and send it to two of their friends, those in turn send it to two of their friends and so on.

How many e-mails would have been sent by the time it did 30 sets?

14.

ser No : 00347

rance to a members club stands a stranger seeking admission. A friend told him that it's easy to get in. ıave to answer a question corrcetly! Answering wrong, however, will result in being shot!

ittle longer, the man waits in a back alley near the entrance for people to go in. After a while a man comes rance. The door warden asks him: "Twelve?" to which he replies "Six!" and goes in.

ısy." our friend thinks, but he waits a little longer.

ıan comes to the door. "Six?" the door warden asks, to which he replies "Three!" and goes in.

o good to be true" our friend thinks, and he was right. Because, when asked "Four?", he answered "Two!" ound dead in the alley.

the correct answer?
l by : Milind Gadagkar

15.

Sarika multiplied 414 by certain number and obtained 69958 as the answer. But she found that there is some error in the answer - both the 9s in the answer are wrong and all the other digits are correct.

Can you find the correct answer?

16. Find the least number which when divided by 35, leaves remainder 25; when divided by 45, leaves remainder 35 and when divided by 55, leaves remainder 45.

17. The ratio of Boys to Girls is 6:4. 60% of the boys and 40% of the girls take lunch in the canteen. What % of class takes lunch in canteen?

18. In the following multiplication, certain digits have been replaced with asterisks (*). Replace all the asterisks such that the problem holds the result.

```
  * * 7


X 3 * *


---------


* 0 * 3


* 1 *


* 5 *


-------------


* 7 * * 3
```

19. How long would it take you to count 1 billion orally if you could count 200 every minute and were given a day off every four years?

Assume that you start counting on 1 January 2001.

20. Five students - Akash, Chintan, Jignesh, Mukund and Venky - appeared for an exam. There were total five questions - two multiple choice (a, b or c) and three true/false questions. They answered five questions each and answered as follow.

	I	II	III	IV	V
Chintan	c	b	True	True	False
Akash	c	c	True	True	True
Jignesh	a	c	False	True	True
Mukund	b	a	True	True	False
Venky	b	b	True	False	True

Also, no two students got the same number of correct answers.

Can you tell which are the correct answers? What are their individual score?

21. Eleven boys and girls wait to take their seats in the same row in a movie theater. There are exactly 11 seats in the row.

They decided that after the first person sits down, the next person has to sit next to the first. The third sits next to one of the first two and so on until all eleven are seated. In other words, no person can take a seat that separates him/her from at least one other person.

How many different ways can this be accomplished? Note that the first person can choose any of the 11 seats.

22. The secret agent X emailed a code word to his head office. They are "AIM DUE OAT TIE MOD". But four of these five words are fake and only one contains the information.

The agent X also mailed a sentence as a clue - if I tell you any one character of the code word, you would be able to tell the number of vowels in the code word.

Can you tell which is the code word?

23.

ser No : 00361

- Abraham, Bobby, Clinton and Denial - are standing in a straight line.

One man is fair, handsome and unscarred.
Two men who are not fair, are each standing next to Abraham.
Bobby is the only man standing next to exactly one handsome man.
Clinton is the only man not standing next to exactly one scarred man.

ir, handsome and unscarred?

24. An orange colored glass has Orange juice and white colored glass has Apple juice both of equal volumes. 50ml of the orange juice is taken and poured into the white glass. After that similarly, 50ml from the white glass is poured into the orange glass.

Of the two quantities, the amount of apple juice in the orange glass and the amount of orange juice in the white glass, which one is greater and by how much?

25.

ser No : 00433

nnie, Candy and Dina visited Edy on 14th February.

The time of each visit was as follows:
8:00
at 9:00
t 10:00
11:00
e mentioned above may be either AM or PM.
Candy did not visit Edy between Bunnie and Dina.
At least one female visited Edy between Annie and Bunnie.
Annie did not visit Edy before both Candy and Dina.

ell at what time did they individually visit Edy?

26.

In training for a competition, you find that swimming downstream (with the current) in a river, you can swim 2 miles in 40 minutes, & upstream (against the current), you can swim 2 miles in 60 minutes.

How long would it take you to swim a mile in still water?

ser No : 00570

A is the father of two children - B and D who are of different sexes.
C is B's spouse.
E is the same sex as D.
B and C have the two children - F who is the same sex as B and G who is the as C.
E's mother, H who is married to L, is the sister of D's mother, M.
E and E's spouse, I have two children - J and K who are the same sex as I.

no persons have married more than once. Also, there are more number of females than an you tell how many females are there?

28. A positive integer that, when added to 1000 gives a sum which is greater than when multiplied by 1000.

Find the positive integer.

29. Mr. D'souza has bought four cars - Merc, Honda, Ford, Zen - as presents for his sons' birthdays, all of which are next week. Given the following information, what will each son get?

Alan will not get the Honda unless Barry gets the Merc and Denzil gets the Ford. Barry will not get the Ford unless Carl gets the Zen and Alan gets the Merc. Denzil will not get the Zen unless Alan gets the Honda and Barry gets the Merc. Alan will not get the Merc unless Carl gets the Zen and Denzil gets the Ford. Barry will not get the Merc unless Alan gets the Zen and Denzil gets the Ford. Alan will not get the Zen unless Barry gets the Honda and Carl gets the Merc. Carl will not get the Zen unless Barry gets the Honda and Alan gets the Ford. Alan will not get the Ford unless Barry gets the Zen and Denzil gets the Honda. Carl will not get the Merc unless Denzil gets the Honda.

30.

ser No : 00800

4 mathematicians - Brahma, Sachin, Prashant and Nakul - having lunch in a hotel. Suddenly, Brahma
2 integer numbers greater than 1 and says, "The sum of the numbers is..." and he whispers the sum to
hen he says, "The product of the numbers is..." and he whispers the product to Prashant. After that
conversation takes place :

Prashant, I don't think that we know the numbers.
: Aha!, now I know the numbers.
Oh, now I also know the numbers.
ow, I also know the numbers.

the numbers? Explain your answer.
/

31.

Substitute digits for the letters to make the following subtraction problem true.

```
  S A N T A

- C L A U S

-----------

    X M A S
```

Note that the leftmost letter can't be zero in any word. Also, there must be a one-to-one mapping between digits and letters. e.g. if you substitute 3 for the letter M, no other letter can be 3 and all other M in the puzzle must be 3.

INFOSYS Puzzles Part-2

9. Five people A ,B ,C ,D ,E are related to each other.
Four of them make one true statement each as follows.

(i) B is my father's brother.
(ii) E is my mother-in-law.
(iii)C is my son-in-law's brother
(iv)A is my brother's wife.

Ans: (i) D
(ii) B
(iii) E
(iv) C (10 marks)

10. Some statements are given below:

L says all of my other four friends have money
M says that P said that exactly one among them has money
N says that L said that precisely two among them have money
O says that M said that three of the others have money
P, L and N said that they have money

All the above statement are false..
Who has money & who doesn't have any money?

(5 marks)

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Infosys Test #3

1. Mr.Mathurs jewels have been stolen from his bank locker .
The bank has lockers of 12 people which are arranged in an array of 3 rows and 4 columns like:

1
2
3
4
5
6
7
8
9
10
11
12

The locker belonging to JONES was to the right of BLACK'S locker and directly above MILLAR'S.
BOOTH'S locker was directly above MILLAR'S.
SMITH'S locker was also above GRAY's (though not directly).
GREEN'S locker was directly below SMITH'S.
WILSON'S locker was between that of DAVIS and BOOTH.
MILLAR'S locker was on the bottom row directly to the right of HERD'S.
WHITE'S locker was on the bottom right hand corner in the same column as BOOTH'S.

Which box belonged to Mr.Mathurs?

Ans: Box number 9 belongs to Mr.Mathurs.

2. Fifty minutes ago if it was four times as many minutes past three o'clock,how many minutes is it to six o'clock?

Ans: Twenty six minutes.

3. If a clock takes 7seconds to strike 7, how long will the same clock take to strike 10?

Ans: The clock strikes for the first time at the start and takes 7 seconds for 6 intervals-thus for one interval time
taken=7/6.
Therefore, for 10 seconds there are 9 intervals and time taken is 9*7/6=10 and 1/2 seconds.

4. Three criminals were arrested for shop lifting.
However, when interrogated only one told the truth in both his statements, while the other two each told one true statement and one lie.
The statements were:

ALBERT :(a)Chander passed the merchandise. (b)Bruce created the diversion.
BRUCE :(a)Albert passed the merchandise. (b)I created the diversion.
CLIVE :(a)I took the goods out of the shop. (b)Bruce passed them over.

Ans: Albert passed the goods.Bruce created the diversion..Clive took the goods out of the shop.

5. Everyday in his business a merchant had to weigh amounts from 1 kg to 121 kgs, to the nearest kg.
What are the minimum number of weight required and how heavy should they be?

Ans: .The minimum number is 5 and they should weigh 1,3,9,27 and 81 kgs.

6. A hotel has 10 storeys.Which floor is above the floor below the floor, below the floor above the floor, below the floor above the fifth.

Ans: The sixth floor.

7. Seven members sat around a table for three days for a conference.
The member's names were Abhishek, Amol, Ankur, Anurag,Bhuwan ,Vasu and Vikram.
The meetings were chaired by Vikram.
On the first evening members sat around the table alphabetically.
On the following two nights, Vikram arranged the seatings so that he could have Abhishek as near to him as possible and abesent minded Vasu as far away as he could.
On no evening did any person have sitting next to him a person who had previously been his neighbour.
How did Vikram manage to seat everybody to the best advantage on the second and third evenings?

Ans:

Second evening:Vikram,Ankur,Abhishek,Amol,Vasu,Anurag and Bhuwan.
Third evening :Vikram,Anurag,Abhishek,Vasu,Bhuwan,Ankur,Amol.

8. Two trains start from stations A and B spaced 50 kms apart at the same time and speed.
As the trains start, a bird flies from one train towards the other and on reaching the second train, it flies back to the first train.This is repeated till the trains collide.
If the speed of the trains is 25 km/h and that of the bird is 100km/h.
How much did the bird travel till the collision.

Ans: 100 kms.

9. Four prisoners escape from a prison.
The prisoners, Mr East, Mr West, Mr South, Mr North head towards different directions after escaping.
The following information of their escape was supplied:

The escape routes were The North Road, South Road, East Road and West Road.
None of the prisoners took the road which was their namesake.
Mr.East did not take the South Road
Mr.West did not the South Road.
The West Road was not taken by Mr.East

What road did each of the prisoners take to make their escape?

Ans: Mr.East took the North Road
Mr.West took the East Road
Mr.North took the South Road
Mr.South took the West Road.

10. Complete the series:
5, 20, 24, 6, 2, 8, ?

Ans: 12 (as 5*4=20, 20+4=24, 24/4=6, 6-4=2, 2*4=8, 8+4=12).

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nfosys Test #4

. Replace each letter by a digit.
Each letter must be represented by the same digit and no beginning letter of a word can be 0.

O N E
O N E
O N E
O N E

T E N

Ans: 0 =1, N = 8 ,E = 2, T = 7

2. Ann, Boobie, Cathy and Dave are at their monthly business meeting.
Their occupations are author, biologist, chemist and doctor, but not necessarily in that order.
Dave just told the biologist that Cathy was on her way with doughnuts.
Ann is sitting across from the doctor and next to the chemist.
The doctor was thinking that Boobie was a goofy name for parent's to choose,but didn't say anything.
What is each person's occupation?

Ans: Since Dave spoke to the biologist and Ann sat next to the chemist and across the doctor, Cathy must be the author
and Ann the biologist.
The doctor didn't speak, but David did, so Bobbie is the doctor and Dave the chemist.

3. Sometime after 10:00 PM a murder took place.
A witness claimed that the clock must have stopped at the time of the shooting.
It was later found that the postion of both the hands were the same but their positions had interchanged.
Tell the time of the shooting (both actual and claimed).

Ans: Time of shooting = 11:54 PM
Claimed Time = 10:59 PM

4. Next number in the series is
1 , 2 , 4 , 13 , 31 , 112 , ?

Ans: 224.
No number has digits more than 4. All of them are 1 , 2, 4, 8 , 16 , 32 , 64 converted to numbers in base 5

5. Shahrukh speaks truth only in the morning and lies in the afternoon, whereas Salman speaks truth only in the afternoon. A
says that B is Shahrukh. Is it morning or afternoon and who is A - Shahrukh or Salman.

Ans: Afternoon ; A is Salman.

6. Two trains starting at same time, one from Bangalore to Mysore and other in opposite direction arrive at their
destination 1 hr and 4 hours respectively after passing each other. How nuch faster is one train from other?

Ans: Twice

7. There are 6 volumes of books on a rack kept in order (ie vol.1, vol. 2 and so on).
Give the position after the following changes were noticed.

All books have been changed
Vol.5 was directly to the right of Vol.2
Vol.4 has Vol.6 to its left and both weren't at Vol.3's place

Vol.1 has Vol.3 on right and Vol.5 on left
An even numbered volume is at Vol.5's place

Find the order in which the books are kept now.

Ans: 2 , 5 , 1 , 3 , 6 , 4

8. I bought a car with a peculiar 5 digit numbered licence plate which on reversing could still be read.
On reversing value is increased by 78633.Whats the original number if all digits were different?

Ans: Only 0 1 6 8 and 9 can be readupside down.So on rearranging these digits we get the answer as 10968

9. The shape in the sketch below is that of a square attached to half of a similar square.Divide it into four equal pieces

Ans: Hint : the figure can be divided into 12 equal triangles

10. Supposing a clock takes 7 seconds to strike 7. How mlong will it take to strike 10?

Ans: 10 1/2 seconds.

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Infosys Test #5

1) A man collects cigarette stubs and makes one full cigarette with every 8 stubs.
If he gets 64 stubs how many full cigarettes can he smoke.

Ans: 8+1=9

2) A soldier looses his way in a thick jungle. At random he walks from his camp but mathematically in an interesting fashion.
First he walks one mile East then half mile to North. Then 1/4 mile to West, then 1/8 mile to South and so on making a loop.
Finally how far he is from his camp and in which direction.

Ans: Distance travelled in north and south directions
1/2 - 1/8 + 1/32 - 1/128 + 1/512 - and so on
= 1/2/((1-(-1/4))
Similarly in east and west directions
1- 1/4 + 1/16 - 1/64 + 1/256 - and so on
= 1/((1- (- 1/4))
Add both the answers

3) How can 1000000000 be written as a product of two factors neither of

them containing zeros

Ans: 2 power 9 x 5 power 9

4) Conversation between two mathematcians:
First : I have three childern. The product of their ages is 36.
If you sum their ages, it is exactly same as my neighbour's door number on my left.
The second mathematician verfies the door number and says that it is not sufficient.
Then the first says " Ok one more clue is that my youngest is really the youngest". Immmediately the second mathematician answers .
Can you answer the question asked by the first mathematician?
What are the childeren ages?

Ans 1,6 and 6

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

Ans : 383 + 1 = 384

6) 500 men are arranged in an array of 10 rows and 50 columns according to their heights.
Tallest among each row of all are asked to fall out.
And the shortest among them is A.
Similarly after resuming that to their original podsitions that the shortest among each column are asked to fall out.
And the tallest among them is B .
Now who is taller among A and B ?

Ans A

7) A person with some money spends1/3 for cloths, 1/5 of the remaining for food and 1/4 of the remaining for travel.
He is left with Rs 100/- .
How much did he have with him in the begining ?

Ans: Rs 250/-

8) There are six boxes containing 5 , 7 , 14 , 16 , 18 , 29 balls of either red or blue in colour.
Some boxes contain only red balls and others contain only blue.
One sales man sold one box out of them and then he says
" I have the same number of red balls left out as that of blue ".
Which box is the one he solds out ?

Ans: Total no of balls = 89 and (89-29 /2) = 60/2 = 30
and also 14 + 16 = 5 + 7 + 18 = 30

9) A chain is broken into three pieces of equal lenths containing 3 links each.
It is taken to a backsmith to join into a single continuous one .
How many links are to to be opened to make it ?

Ans : 2.

10) Grass in lawn grows equally thick and in a uniform rate.
It takes 24 days for 70 cows and 60 days for 30 cows to eat the whole of the grass.
How many cows are needed to eat the grass in 96 days.?

Ans : 20
g - grass at the beginning
r - rate at which grass grows, per day
y - rate at which one cow eats grass, per day
n - no of cows to eat the grass in 96 days
g + 24*r = 70 * 24 * y
g + 60*r = 30 * 60 * y
g + 96*r = n * 96 * y
Solving, n = 20.

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Infosys Test #6

1. From a vessel, 1/3rd of the liquid evaporates on the first day.
On the second day 3/4th of the remaining liquid evaporates.
What fraction of the volume is present at the end of the second day.

Ans: 50%

2. An orange glass has orange juice and white glass has apple juice both of equal volumes.
50ml of the orange juice is taken and poured into the apple juice.
50ml from the white glass is poured into the orange glass.
Of the two quantities, the amount of apple juice in the orange glass and the amount of orange juice in the white glass,
which one is greater and by how much?

Ans: The two quantities are equal
Infosys Test #1

1. Father's age is three years more than three times the son's age.
After three years, father's age will be ten years more than twice the son's age.
What is the father's present age.

Ans: 33 years. (2 marks)

2. Find the values of each of the alphabets.

```
N O O N
S O O N
+ M O O N
----------
J U N E
```

Ans: 9326 (2 marks)

3. There are 20 poles with a constant distance between each pole
A car takes 24 second to reach the 12th pole.
How much will it take to reach the last pole.

Ans: 41.45 seconds (2 marks)

Let the distance between two poles = x
Hence 11x:24::19x:?

4. A car is travelling at a uniform speed.
The driver sees a milestone showing a 2-digit number.
After travelling for an hour the driver sees another milestone with the same digits in reverse order.
After another hour the driver sees another milestone containing the same two digits.
What is the average speed of the driver.

Ans: 45 kmph (4 marks)

5. The minute and the hour hand of a watch meet every 65 minutes.
How much does the watch lose or gain time and by how much?

Ans: Gains; 5/11 minutes (4 marks)

6. Ram, Shyam and Gumnaam are friends.
Ram is a widower and lives alone and his sister takes care of him.
Shyam is a bachelor and his neice cooks his food and looks after his house.
Gumnaam is married to Gita and lives in large house in the same town.
Gita gives the idea that all of them could stay together in the house and share monthly expenses equally.
During their first month of living together, each person contributed Rs.25.
At the end of the month, it was found that Rs 92 was the expense so the remaining amount was distributed equally
among everyone.
The distribution was such that everyone recieved a whole number of Rupees.
How much did each person recieve?

Ans. Rs 2 (4 marks)
(Hint: Ram's sister, Shyam's neice and Gumnaam's wife are the same person)

7. Four persons A, B, C and D are playing cards.
Each person has one card, laid down on the table below him, which has two different colours on either side.
The colours visible on the table are Red, Green, Red and Blue.
They see the color on the reverse side and give the following comment.

A: Yellow or Green
B: Neither Blue nor Green
C: Blue or Yellow
D: Blue or Yellow

Given that out of the 4 people 2 always lie find out the colours on the cards each person.

8.

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Infosys Test #2

1. At 6'o a clock ticks 6 times.
The time between first and last ticks is 30 seconds.
How long does it tick at 12'o clock.

Ans: 66 sec. (2 marks)

2. Three friends divided some bullets equally.
After all of them shot 4 bullets the total number of bullets remaining is equal to the bullets each had after division.
Find the original number divided.

Ans: 18 (2 marks)

Initially . x x x
Now x-4 x-4 x-4
Equation is 3x-12 = x

3. A ship went on a voyage.
After it had travelled 180 miles a plane statrted with 10 times the speed of the ship.
Find the distance when they meet from starting point.

Ans: 200miles. (2 marks)
Distance travelled by plane = 1/10 distance travelled by ship + 180

4. Complete the Table given below:

Three football teams are there. Given below is the group table. Fill in the x's

Played
Won
Lost
Draw
Goals For
Goals Against
A
2
2
x
x
x
1
B
2
x
x
1
2
4
C
2
x
x

x
3
7

Ans: The filled table is given below (4 marks)

Played
Won
Lost
Draw
Goals For
Goals Against
A
2
2
0
0
7
1
B
2
0
1
1
2
4
C
2
0
1
1
3
7

5. There are 3 societies A, B, C.
A lent cars to B and C as many as they had already.
After some time B gave as many tractors to A and C as many as they have. After sometime c did the same thing. At the end of this transaction each one of them had 24.
Find the cars each orginally had.

Ans: A had 39 cars, B had 21 cars & C had 12 cars (4 marks)

6. There N stations on a railroad.
After adding X stations on the rail route 46 additional tickets have to be printed.
Find N and X.

Ans. x=2 and N=11

Let initially, N(N-1) = t
After adding, (N+X)(N+X-1) = t+46
By trail and error method (4 marks)

7. Given that April 1 is tuesday.
A, B, C are 3 persons told that their farewell party was on

A - May 8, thursday
B - May 10,tuesday
C - June 5, friday

Out of A, B, C only one made a completetly true statement concerning date,day and month
The other told two one told the day right and the other the date right..
What is correct date, month, day.

Ans: B - (May 10) SUNDAY
C - June 6 (Friday). (5 marks)

8. The Bulls, Pacers, Lakers and Jazz ran for a contest.
Anup, Sujit, John made the following statements regarding results.

Anup said either Bulls or Jazz will definitely win
Sujit said he is confident that Bulls will not win
John said he is confident that neither Jazz nor Lakers will win

When the result cameit was found that only one of the above three had made a correct statement.
Who has made the correct statement and who has won the contest.

Ans: Sujith; Lakers (5marks)

9. Five people A ,B ,C ,D ,E are related to each other.
Four of them make one true statement each as follows.

(i) B is my father's brother.
(ii) E is my mother-in-law.
(iii)C is my son-in-law's brother
(iv)A is my brother's wife.

Ans: (i) D
(ii) B
(iii) E
(iv) C (10 marks)

10. Some statements are given below:

L says all of my other four friends have money
M says that P said that exactly one among them has money
N says that L said that precisely two among them have money
O says that M said that three of the others have money
P, L and N said that they have money

All the above statement are false..
Who has money & who doesn't have any money?

(5 marks)

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Infosys Test #3

1. Mr.Mathurs jewels have been stolen from his bank locker .
The bank has lockers of 12 people which are arranged in an array of 3 rows and 4 columns like:

1
2
3
4
5
6
7
8
9
10
11
12

The locker belonging to JONES was to the right of BLACK'S locker and directly above MILLAR'S.
BOOTH'S locker was directly above MILLAR'S.
SMITH'S locker was also above GRAY's (though not directly).
GREEN'S locker was directly below SMITH'S.
WILSON'S locker was between that of DAVIS and BOOTH.
MILLAR'S locker was on the bottom row directly to the right of HERD'S.
WHITE'S locker was on the bottom right hand corner in the same column as BOOTH'S.

Which box belonged to Mr.Mathurs?

Ans: Box number 9 belongs to Mr.Mathurs.

2. Fifty minutes ago if it was four times as many minutes past three o'clock,how many minutes is it to six o'clock?

Ans: Twenty six minutes.

3. If a clock takes 7seconds to strike 7, how long will the same clock take to strike 10?

Ans: The clock strikes for the first time at the start and takes 7 seconds for 6 intervals-thus for one interval time
taken=7/6.
Therefore, for 10 seconds there are 9 intervals and time taken is 9*7/6=10 and 1/2 seconds.

4. Three criminals were arrested for shop lifting.
However, when interrogated only one told the truth in both his statements, while the other two each told one true statement and one lie.
The statements were:

ALBERT :(a)Chander passed the merchandise. (b)Bruce created the diversion.
BRUCE :(a)Albert passed the merchandise. (b)I created the diversion.
CLIVE :(a)I took the goods out of the shop. (b)Bruce passed them over.

Ans: Albert passed the goods.Bruce created the diversion..Clive took the goods out of the shop.

5. Everyday in his business a merchant had to weigh amounts from 1 kg to 121 kgs, to the nearest kg.

What are the minimum number of weight required and how heavy should they be?

Ans: .The minimum number is 5 and they should weigh 1,3,9,27 and 81 kgs.

6. A hotel has 10 storeys.Which floor is above the floor below the floor, below the floor above the floor, below the floor above the fifth.

Ans: The sixth floor.

7. Seven members sat around a table for three days for a conference.
The member's names were Abhishek, Amol, Ankur, Anurag,Bhuwan ,Vasu and Vikram.
The meetings were chaired by Vikram.
On the first evening members sat around the table alphabetically.
On the following two nights, Vikram arranged the seatings so that he could have Abhishek as near to him as possible and abesent minded Vasu as far away as he could.
On no evening did any person have sitting next to him a person who had previously been his neighbour.
How did Vikram manage to seat everybody to the best advantage on the second and third evenings?

Ans:
Second evening:Vikram,Ankur,Abhishek,Amol,Vasu,Anurag and Bhuwan.
Third evening :Vikram,Anurag,Abhishek,Vasu,Bhuwan,Ankur,Amol.

8. Two trains start from stations A and B spaced 50 kms apart at the same time and speed.
As the trains start, a bird flies from one train towards the other and on reaching the second train, it flies back to the first train.This is repeated till the trains collide.
If the speed of the trains is 25 km/h and that of the bird is 100km/h.
How much did the bird travel till the collision.

Ans: 100 kms.

9. Four prisoners escape from a prison.
The prisoners, Mr East, Mr West, Mr South, Mr North head towards different directions after escaping.
The following information of their escape was supplied:

The escape routes were The North Road, South Road, East Road and West Road.
None of the prisoners took the road which was their namesake.
Mr.East did not take the South Road
Mr.West did not the South Road.
The West Road was not taken by Mr.East

What road did each of the prisoners take to make their escape?

Ans: Mr.East took the North Road
Mr.West took the East Road
Mr.North took the South Road
Mr.South took the West Road.

10. Complete the series:
5, 20, 24, 6, 2, 8, ?

Ans: 12 (as 5*4=20, 20+4=24, 24/4=6, 6-4=2, 2*4=8, 8+4=12).

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nfosys Test #4

1. Replace each letter by a digit.
Each letter must be represented by the same digit and no beginning
letter of a word can be 0.

```
O N E
O N E
O N E
O N E
-------
T E N
```

Ans: 0 =1, N = 8 ,E = 2, T = 7

2. Ann, Boobie, Cathy and Dave are at their monthly business meeting.
Their occupations are author, biologist, chemist and doctor, but not
necessarily in that order.
Dave just told the biologist that Cathy was on her way with doughnuts.
Ann is sitting across from the doctor and next to the chemist.
The doctor was thinking that Boobie was a goofy name for parent's to
choose,but didn't say anything.
What is each person's occupation?

Ans: Since Dave spoke to the biologist and Ann sat next to the chemist and
across the doctor, Cathy must be the author
and Ann the biologist.
The doctor didn't speak, but David did, so Bobbie is the doctor and
Dave the chemist.

3. Sometime after 10:00 PM a murder took place.
A witness claimed that the clock must have stopped at the time of the
shooting.
It was later found that the postion of both the hands were the same but
their positions had interchanged.
Tell the time of the shooting (both actual and claimed).

Ans: Time of shooting = 11:54 PM
Claimed Time = 10:59 PM

4. Next number in the series is
1 , 2 , 4 , 13 , 31 , 112 , ?

Ans: 224.
No number has digits more than 4. All of them are 1 , 2, 4, 8 , 16 ,
32 , 64 converted to numbers in base 5

5. Shahrukh speaks truth only in the morning and lies in the afternoon,
whereas Salman speaks truth only in the afternoon. A

says that B is Shahrukh. Is it morning or afternoon and who is A - Shahrukh or Salman.

Ans: Afternoon ; A is Salman.

6. Two trains starting at same time, one from Bangalore to Mysore and other in opposite direction arrive at their
destination 1 hr and 4 hours respectively after passing each other. How nuch faster is one train from other?

Ans: Twice

7. There are 6 volumes of books on a rack kept in order (ie vol.1, vol. 2 and so on).
Give the position after the following changes were noticed.

All books have been changed
Vol.5 was directly to the right of Vol.2
Vol.4 has Vol.6 to its left and both weren't at Vol.3's place
Vol.1 has Vol.3 on right and Vol.5 on left
An even numbered volume is at Vol.5's place

Find the order in which the books are kept now.

Ans: 2 , 5 , 1 , 3 , 6 , 4

8. I bought a car with a peculiar 5 digit numbered licence plate which on reversing could still be read.
On reversing value is increased by 78633.Whats the original number if all digits were different?

Ans: Only 0 1 6 8 and 9 can be readupside down.So on rearranging these digits we get the answer as 10968

9. The shape in the sketch below is that of a square attached to half of a similar square.Divide it into four equal pieces

Ans: Hint : the figure can be divided into 12 equal triangles

10. Supposing a clock takes 7 seconds to strike 7. How mlong will it take to strike 10?

Ans: 10 1/2 seconds.

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1) A man collects cigarette stubs and makes one full cigarette with every 8 stubs.
If he gets 64 stubs how many full cigarettes can he smoke.

Ans: 8+1=9

2) A soldier looses his way in a thick jungle. At random he walks from his camp but mathematically in an interesting fashion.
First he walks one mile East then half mile to North. Then 1/4 mile to West, then 1/8 mile to South and so on making a loop.
Finally how far he is from his camp and in which direction.

Ans: Distance travelled in north and south directions
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And the shortest among them is A.
Similarly after resuming that to their original podsitions that the shortest among each column are asked to fall out.
And the tallest among them is B .
Now who is taller among A and B ?

Ans A

7) A person with some money spends1/3 for cloths, 1/5 of the remaining for food and 1/4 of the remaining for travel.
He is left with Rs 100/- .
How much did he have with him in the begining ?

Ans: Rs 250/-

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" I have the same number of red balls left out as that of blue ".
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Ans: Total no of balls = 89 and (89-29 /2) = 60/2 = 30
and also 14 + 16 = 5 + 7 + 18 = 30

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It is taken to a backsmith to join into a single continuous one .
How many links are to to be opened to make it ?

Ans : 2.

10) Grass in lawn grows equally thick and in a uniform rate.
It takes 24 days for 70 cows and 60 days for 30 cows to eat the whole of the grass.
How many cows are needed to eat the grass in 96 days.?

Ans : 20
g - grass at the beginning
r - rate at which grass grows, per day
y - rate at which one cow eats grass, per day
n - no of cows to eat the grass in 96 days
g + 24*r = 70 * 24 * y
g + 60*r = 30 * 60 * y
g + 96*r = n * 96 * y
Solving, n = 20.

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Infosys Test #6

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1. From a vessel, 1/3rd of the liquid evaporates on the first day.
On the second day 3/4th of the remaining liquid evaporates.
What fraction of the volume is present at the end of the second day.

Ans: 50%

2. An orange glass has orange juice and white glass has apple juice both of equal volumes.
50ml of the orange juice is taken and poured into the apple juice.
50ml from the white glass is poured into the orange glass.
Of the two quantities, the amount of apple juice in the orange glass and the amount of orange juice in the white glass,
which one is greater and by how much?

Ans: The two quantities are equal