

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 loses 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 $\frac{1}{4}$ mile to West, then $\frac{1}{8}$ 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

$$\frac{1}{2} - \frac{1}{8} + \frac{1}{32} - \frac{1}{128} + \frac{1}{512} - \text{and so on}$$
$$= \frac{1/2}{(1 - (-1/4))}$$

Similarly in east and west directions

$$1 - \frac{1}{4} + \frac{1}{16} - \frac{1}{64} + \frac{1}{256} - \text{and so on}$$
$$= \frac{1}{(1 - (-1/4))}$$

Add both the answers

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

Ans: $2^9 \times 5^9$

4) Conversation between two mathematicians:

First : I have three children. 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 verifies 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". Immediately the second mathematician answers .

Can you answer the question asked by the first mathematician?

What are the children's 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 positions 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

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7) A person with some money spends $\frac{1}{3}$ for cloths, $\frac{1}{5}$ of the remaining for food and $\frac{1}{4}$ of the remaining for travel.

He is left with Rs 100/- .

How much did he have with him in the beginning ?

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 sold 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 lengths containing 3 links each.

It is taken to a blacksmith to join into a single continuous one .

How many links are 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, $n = 20$.