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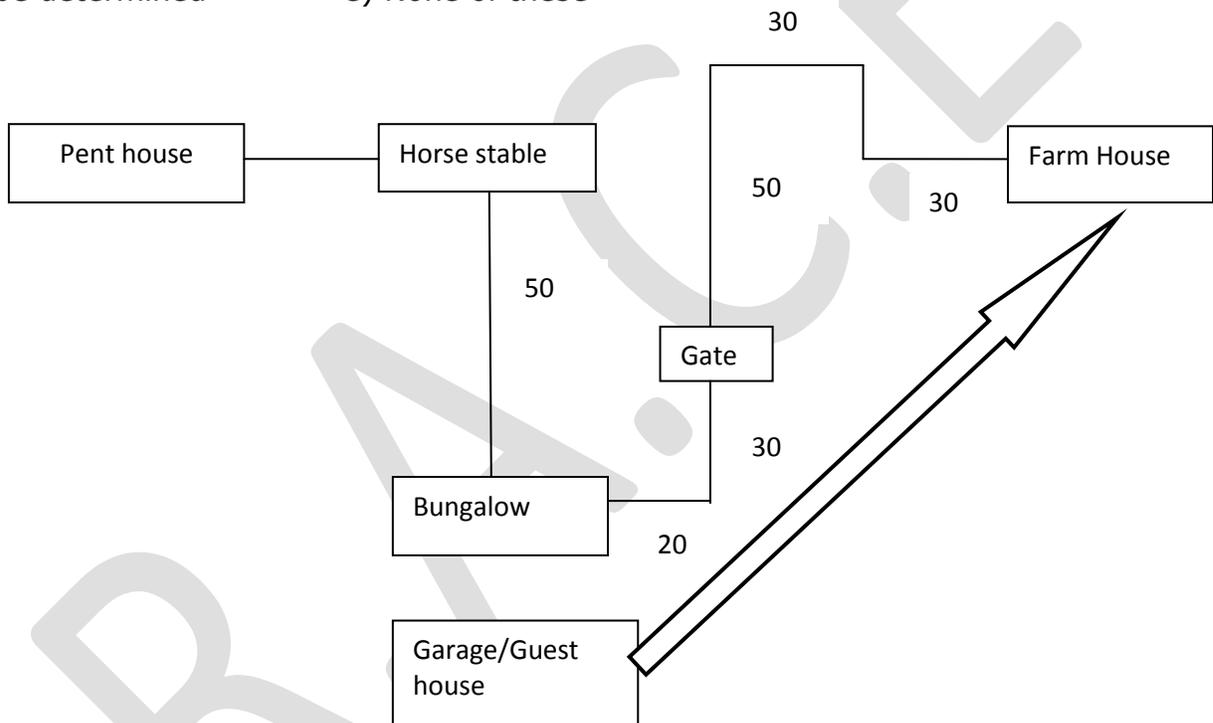
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Puzzle 1:

My penthouse is to the left of my horse's stable, which is 50m to the north of my bungalow. My garage and the guest house are at the back of my bungalow. I have to walk 30m to my left after walking a distance of 20m from my bungalow's main door, to reach the gate. To reach my farm house from the gate, I've to walk 50m straight and then take two consecutive right turns followed by a left turn (each 30m apart). The face of bungalow is towards the north and the main door is towards the east.

1. My farm house is in which direction with respect to my guest house?

- a) North **b) North-east** c) East
 d) Can't be determined e) None of these



Puzzle 2:

Eight members of a family A B C D E F G & H are sitting around a circular table. Some of them are facing inside while some are facing outside the centre.

- The couples are facing inside while the singles are facing outside.
- E is the daughter of C, who is sitting second to the right of her husband.
- B is sitting opposite to his father and facing outside.
- G is sister-in-law of both H and E and also she is not the immediate neighbour of either H

or E.

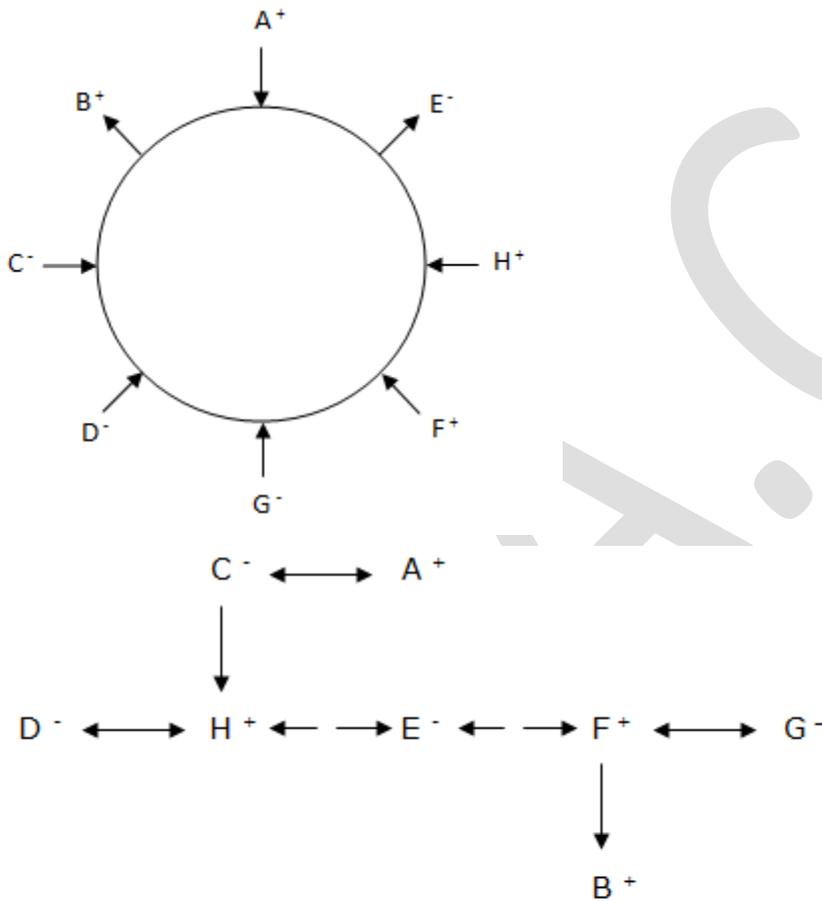
- D is sitting between C and G and it is the only group of three females sitting together.
- H is facing his mother C and G is facing her father-in-law, A.
- E is the only daughter in the family and is sitting second to the right of her nephew.

1. How many people are facing outside?

- a) 2 b) 3 c) 5 d) 1 e) can't be determined

2. How many male members are there in the arrangement?

- a) 4 b) 3 c) 5 d) 1 e) can't be determined



↔ Denotes spouse
 → Sibling
 ↓ Next generation

Puzzle 3:

A hostel accommodate twelve persons in six rooms. The person are A, B, C, D, E, F, P, Q, R, S, T and U. The rooms are 1, 2, 3, 4, 5 and 6. Each room of the hostel is coloured with different colours blue, green, beige, yellow, pink and white. Each room accommodate only two persons.

- A, B, R, T and U are the males in the group.
- Female's rooms are odd-numbered whereas male's rooms are even numbered.
- A and B share a room. S lives in odd numbered room. Neither C nor U does not live with E.
- E does not live in 6 but lives in yellow colour hostel. Neither room 4 nor room 3 is blue or beige.
- The pink room has an odd number but it is not room 3.
- F lives in room 5 with D. Q lives with T.
- The blue room is even-numbered. R lives in the green room whereas D lives in white room.
- S does not live in room 3. T's room is blue.

1. Who among the following are accommodated in the pink coloured room?

- a) A,B b) E,P **c) S,C** d) F,D e) None of these

2. Who among the following are accommodate in room 3?

- a) E,P** b) R,U c) S,C d) F,D e) T,Q

3. In which room are A and B accommodated?

- a) 3 b) 4 **c) 2** d) 5 e) 1

ROOM	PERSON	COLOR
1	S,C	Pink
2	A,B	Beige
3	E,P	Yellow
4	R,U	Green
5	F,D	White
6	T,Q	Blue

Puzzle 4:

In a dance, 7 males and 7 females participated in a dance competition. P, Q, R, S, T, U, V are the male participants, while C, D, E, F, G, H, I are the female participants. All the 14 persons are divided into seven groups. Each group consisted of one male. After the end of the programme, each group was assigned a grade according to its performance. For the purpose of grading 7 letters are used, i.e. X, Y, Z, A, B, J, K indicating descending order. U's group got grade Y. Grade of Q's group was better than at least 3 groups while grade of R's group was better than at least 4 groups. T's partner was G. E's partner was not S. F's group got grade X. P, S, R are not partners of H, I, C respectively. Grade of D's group and H's group are better than H's group and I's group respectively. Grade of Q's group was better than R's group. Grades of T's and P's group are neither J nor K. G's group didn't get grade B. E's group got the grade K.

1. Who among the following was the partner of P?

- a) H **b) I** c) D d) F e) None of these

2. Which of the following statement is/are true?

I. P's group got the grade B

II. Q'S group got the grade B

- a) Only I** b) Only II c) Either I or II d) Can't say e) None of these

Male	Female	Grade
Q ⁺	F ⁻	X
U ⁺	D ⁻	Y
R ⁺	H ⁻	Z
T ⁺	G ⁻	A
P ⁺	I ⁻	B
S ⁺	C ⁻	J
V ⁺	E ⁻	K

5. Syllogism:

All boys are intelligent. Very few girls are intelligent.

None girl is leader. Some professors are leader as well as boys

Conclusion:

I. 36% of girls are intelligent

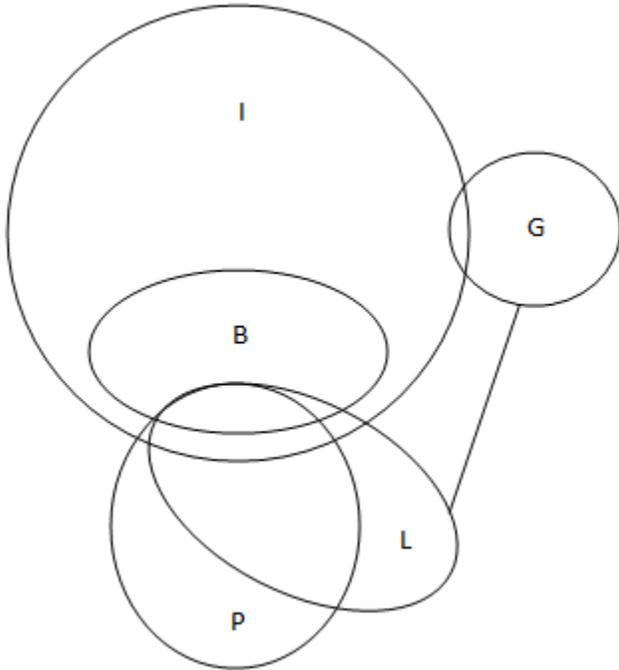
II. 2% girls are intelligent

III. Some boys can never be a girl.

- a) Only II follows b) Only III follows

- c) Both I and II follows** d) Only I follows

- e) None of these



6. Statement:

All Nokia are Samsung

Some samsung are Motorola

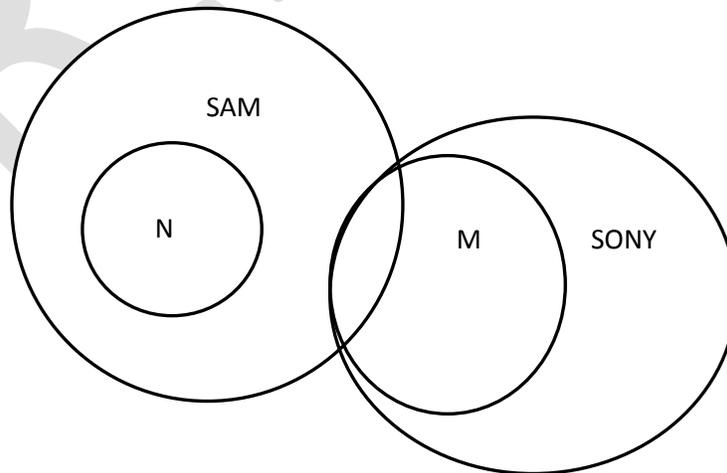
All Motorola are Sony

Conclusion:

Some Sony which are samsung are also part of Nokia

No Motorola is Nokia is a possibility

- a) Only I **b) Only II** c) Either I or II d) Neither I or II e) None of these



7. Statement:

All Sonakshi are sonam

All Katrina are Sonakshi

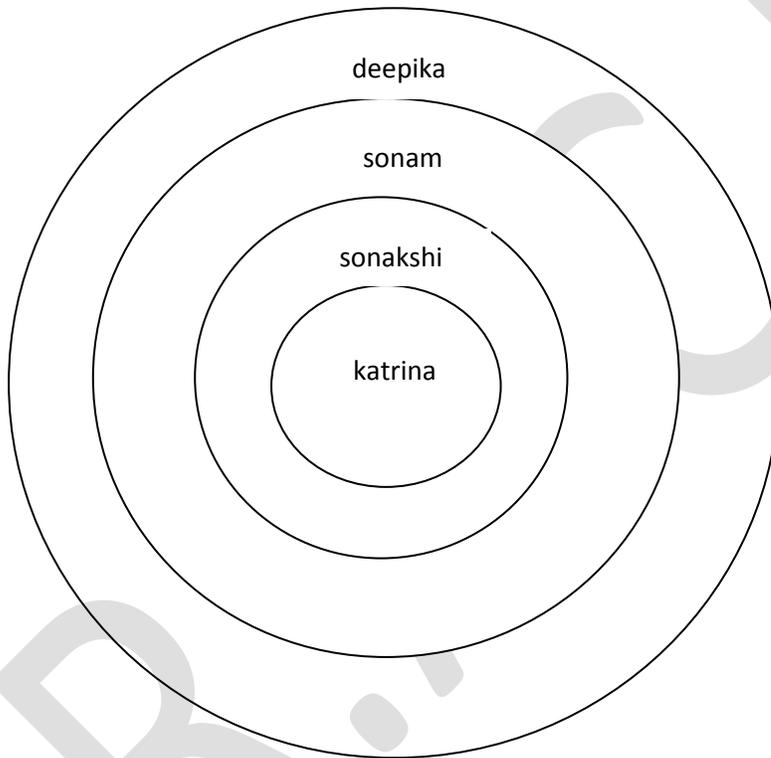
All Sonam are deepika

Conclusion:

All Deepika are Katrina is possibility

Some Deepika which are Sonakshi are also part of Katrina.

- a) Only I b) Only II c) Either I or II d) Neither I or II **e) none of these**



APTITUDE

8. A and B can finish a work in 4 days. C is twice as efficient as A and D's efficiency is half of the efficiency of B. C and D can finish the same work in 5 days. Then in how many days will A and B individually finish their work?

- A) 20 days, 15 days B) 10 days, 5 days **C) 20 days, 5 days**
D) 10 days, 15 days E) 20 days, 25 days

Answer:

$$1/20 + 1/5 = 1 + 4/20 = 5/20$$

A and B = $1/4$

4 days

9. A certain amount is invested in scheme A for 6 years which offers simple interest at the rate of $x\%$ per annum. The same amount is invested in scheme B for 2 years which offers compound interest compounded annually at the rate of 10% per annum. Interest earned from scheme A is twice to that earned from scheme B. If the rate of interest of scheme A had been $(x+2)\%$ per annum, the difference between the interests after corresponding periods would have been Rs.3960. What is the amount invested in each scheme?

- a) 38000 b) 33504 **c) 33000** d) 39250

C.I for 2 years = 10%

$10\% + 1\%$

—————
 21%

SI is twice of CI

SI = $2 \times 21 = 42\%$

SI per annum = $42/6 = 7\%$

SI = $(x+2\%) = (7+2\%) = 9\%$

SI for 6 years = $9 \times 6 = 54\%$

Diff between SI = 3960

$54\% - 42\% = 3960$

$12\% = 3960$

$A = 3960/12 \times 100$

$A = 33000$

Alternate:

$6[(x+2) - x] = 3960$

$6[2\%] = 3960$

$12\% = 3960$

$100\% = 33000$

10) Three friends pooja, pamela and priyanka started from the same starting point and kept travelling, all in the same direction at speed of 50, 45 and 30 kmph respectively. Pamela started 2 hours after priyanka, but surprisingly all three reached the destination point at the same time at 8.30pm on that very day. At what time did pooja start from the starting point ?

- a) 5.00pm b) 5.06pm **c) 4.54pm** d) 3.36pm e) None of these.

$$\frac{\text{Pameela speed}}{\text{priyanka speed}} = \frac{\text{priyanka time}}{\text{pameela time}}$$

$$45 \quad x+2$$

$$30 \quad x$$

$$45x = 30x + 60$$

$$15x = 60$$

$$x = 4$$

pooja: pameela : priyanka

$$180/50$$

$$= 3.6 : 4 : 6$$

$$\text{pooja time} = 3.6 * 60 = 216 \text{ mins} = 3.36 \text{ hrs}$$

$$= 8.30 - 3.36 = 4.54 \text{ pm}$$

11. Pipe A filled the tank in 30 mins and Pipe B filled the tank in 15 mins. Pipe C emptied the tank as 12 litre/min. All the 3 pipes opened, when the tank is full and it empties the tank in 30 mins. What is the capacity of the tank?

- a) 90 litres b) 200 litres c) 80 litres d) 160 litres e) 180 litres

Work rate of A = $100/30 = 3.33\%$ per min.

Work Rate of B = $100/15 = 6.66\%$ per min

Work rate of (A + B) = $3.33\% + 6.66 = 10\%$ per min.

A and B together can fill the tank = $100/10 = 10$ min.

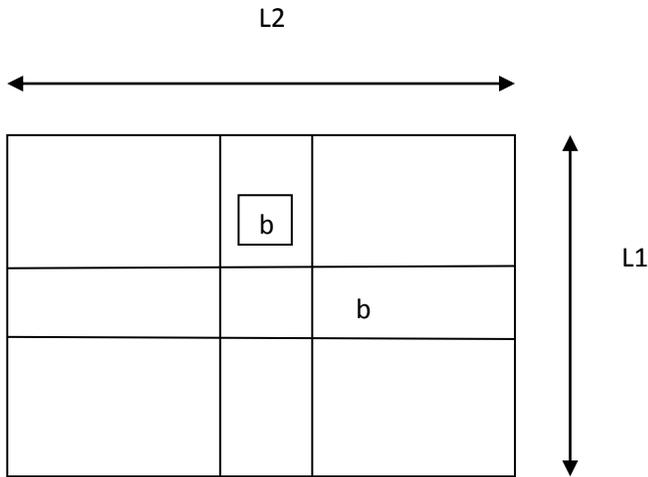
C emptied 12 litre per min. So, in 30 min C must has been emptied $30 * 12 = 360$ litre water.

In 30 minutes, A and B must have been fill 3 times the empty tank and as well as tank was fill initially.

So, Capacity = $360/4 = 90$ litre

12. A rectangular plot, 42m long and 32m wide has two concentrate crossroads (of same width) running in the middle of the plot one parallel to length and other parallel to breadth). The rest of the plot is used as lawn. If the area of the lawn is 1064 square meter. What is the width of the road?

- a) 4 b) 2 c) 10 d) 3 e) 13



$$\text{Total area} = 42 \times 32 = 1344$$

$$\text{Road area} = 1344 - 1064 = 280$$

$$280 - b^2 = (L1 * b) + (L2 * b)$$

$$280 - b^2 = (32 * b) + (42 * b)$$

$$b^2 + 74b - 280 = 0$$

$$(b - 70)(b - 4)$$

$$B = +70, +4$$

Ans: 4

13. After travelling 80km a train meet with an accident and then proceeds $\frac{3}{4}$ of its former speed and arrives at its destination 35mins late. Had the accident occurred 24km further it would have reached the destination only 25mins late. Find the speed of the train?

a) **48kmph** b) 57kmph c) 83kmph d) 40kmph e) 38kmph

Ans: 48kmph

$$\text{Solution } 24 / (3/4x) - 24/x = (35-25)/60$$

$$x = 48 \text{ kmph}$$

14. A train can travel 50% faster than a car. Both start from point A at the same time and reach point B 75 km away from A at the same time. On the way, however the train lost about 12.5 min while stopping at the stations. The speed of car is

a) 100 km/hr b) 110 km/hr **c) 120km/hr** d) 130 km/hr e) 115km/hr

Solution:

Train travels 50% faster than car so it takes 50% less time than car due to stoppage this time difference is equalled by car actual train time.

Train Car

150 100

3x 2x

$$\frac{75}{3x} + \frac{12.5}{60} = \frac{75}{2x}$$

$$\frac{75}{2x} - \frac{75}{3x} = \frac{12.5}{60}$$

$$x = 60$$

Speed of car is 2x, which is 120km/hr

15. The present population of village is 9261 if the annual birth rate is 8.5% and the annual death rate is 3.5%, then calculate the population after 3 ago?

- a) 8000 b) 3504 c) 5275 d) 9250

Solution:

Net increase in population 8.5-3.5= 5%

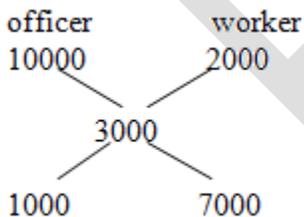
$$x (1+5/100)^3=9261$$

$$x=8000$$

16. The average monthly salary of employees consisting of officers and workers of an organization is 3000 the average salary of an officer is 10000 while that of a worker is 2000 per month. If there are total 400 employees in the organisation, find the no of officers and workers separately ?

- a) 50,350 b) 350,450 c)50,275 d)325,350

Solution:



$$1:7 = 400$$

$$50:350$$

17. 2n years ago the age of raju was four times that of his son and n years ago the age of raju was thrice that of his son. If n years from now the sum of the ages of raju and his son will be 80 years then the difference in the present ages of raju and his son?

- a) 40 b) 60 c) 36 **d) 32** e) None of these

Solution:

2n years ago

$$\text{raju} = 4x$$

$$\text{son} = x$$

$$(x-2n)=4(x-2n)$$

$$n/x=1/2$$

n years from now raju +son =80

$$3x+n+ x+n =80$$

$$2x + n =40$$

$$2n(2n) +n = 40$$

$$n= 8$$

so

$$x =16$$

after n= 8 yrs

$$\text{raju} =3x = 48$$

$$\text{son} = x = 16$$

present ages are 56 and 24 difference is **32**

18. The ratio of the speed of a car, a jeep and a tractor is 3:5:2. The speed of the jeep is 250% the speed of the tractor, which covers 360 km in 12h. What is the average speed of car and jeep together?

- a) **60kmph** b) 75kmph c) 40kmph
d) cannot be determined e) none of these

Answer:

$$3 : 5 : 2$$

car : Jeep: Tractor

$$45\text{km} : 75\text{km} : 30\text{km}$$

$$45+75$$

$$\text{-----} = 60 \text{ km/hr}$$

$$2$$

19. A tank has two inlets P and Q. P alone takes 6 hours and Q alone takes 8 hrs to fill the empty tank completely when there is no leakage. A leakage was caused which would empty the full tank completely in X hours when no inlet is open. Now when only inlet P was opened, it took 15 hours to fill the empty tank completely how much will Q alone take to fill the empty tank completely

- a) **40hrs** b) 60hrs c) 80hrs d) 90hrs e) None of these

Ans: 40hrs

p-----6hrs

q-----8hrs

x-----empty in 15hrs

$$1/6 - x = 1/15$$

$$x = 1/6 - 1/15$$

$$(15-6)/30$$

$$3/30$$

$$x = 10$$

when P outlet empty in 10 hrs

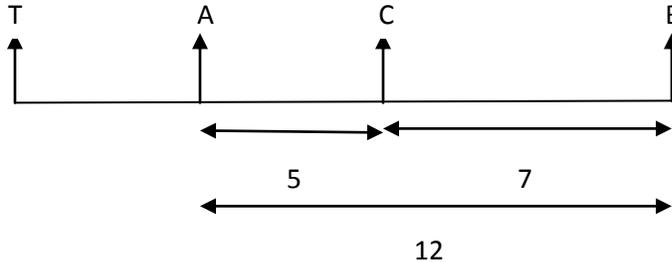
then Q outlet = $1/8 - 1/10$

$$1/40$$

$$= 40\text{hrs}$$

20) A train approaches a tunnel AB. Inside the tunnel a cat located at a point i.e., $5/12$ of the distance AB measured from the entrance A. When the train whistles the cat runs. If the cat moves to the entrance of the tunnel A, the train caught the cat exactly at the entrance. If the cat moves to the exit B, the train caught the cat at exactly the exit. The speed of the train is greater than the speed of the cat by what order?

- a) 1:6 b) 3:5 c) **6:1** d) 5:4 e) none of these



Let the speed of the train be U and the speed of cat be V and train whistles at a point T , x km away from point A

Then

$$\frac{U}{V} = \frac{x}{5k} = \frac{x + 12k}{7k}$$

$$7x = 5(x + 12k)$$

$$\frac{x}{k} = \frac{30}{1}$$

$$\frac{u}{v} = \frac{30}{5 \times 1} = \frac{6}{1}$$

$$6:1$$

21) A vessel contains a mixture of mil and water in the respective ration of 3:1. 32 litres of the mixture was taken out and replaced with the same quantity of milk so that the resultant ratio between the quantities of milk and water in the mixture was 4:1 respectively if 10 litre of the mixture is again taken out from the vessel what is the resultant quantity of water in the mixture?

Explanation:

Let the initial volume be $3x(\text{milk}) : 1x(\text{water})$

32 litre of mixture is taken out

$$\text{Milk to be taken off} = 32 \times \frac{3}{4} = 24\text{lbs}$$

$$\text{Water to be taken off} = 32 \times \frac{1}{4} = 8\text{lbs}$$

Now, from question 32liters of milk is added and the ratio becomes 4:1

$$\frac{3x - 24 + 32}{x - 8} = \frac{4}{1}$$

$$3x + 8 = 4x - 32$$

$$X = 40$$

So, initially 40liters of water is present and from that 8liters is taken off so 32liters of water is present after 1st operation.

Now, 10liters of mixture is taken off

$$10 \times \frac{1}{5} = 2 \text{ litres}$$

Final water = $32 - 2 = 30$ litres

22) The ratio of the sides of the room is 5:2, the cost of whitewashing the ceiling of the room at 50 paise per square meter is Rs.2500 and the cost of preparing the walls at 30 paise per square meter is Rs.2100. The height of the room is?

- a) 31m b) 36m c) 23m d) 20m

l:b = 5:2

Area of ceiling = 5000

$$5x \times 2x = 5000$$

$$X = 22.36$$

Area of wall of the room = $2h(l+b) = 7000$

$$h(7 \times 22.36) = 3500$$

$$H = 23 \text{ (approx)}$$

23) A fires 5 shots to B's 3 but A kills only once in 3shots while B kills once in 2 shots .when B has missed 27times A has killed ?

- a) 30 birds** b) 60 birds c) 72 birds d) 90 birds

B = 54 shots

$$A = (54/3) \times 5 = 90 \text{ shots}$$

A killed 30 birds

24) 6, 36, 324, 2916?

- a) 54272 b) 52233 **c) 52488** d) 65433 e) None of these

Ans:

$$6 \times 6 = 36$$

$$3 + 6 = 9$$

$$36 \times 9 = 324$$

$$3 + 2 + 4 = 9$$

$$324 \times 9 = 2916$$

$$2916 \times 18 = 52488$$

25) Wrong number

26 74 218 654 1946 5834

a) 74 b) 218 c) **654** d) 1946 e) 5834

$$26 \times 3 = 78 - 4 = 74$$

$$74 \times 3 = 224 - 4 = 218$$

$$218 \times 3 = 654 - 4 = 650$$



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