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- Q. No.7.** (A) A man buys 5kg of meat at Rs.500 per kg. In addition, for every kilogram of meat purchased, he has to pay a consumption tax of 6% on the selling price. Calculate the total amount of money that he has to pay. (5)
- (B) It takes Ali 30 minutes to mark a paper. Aslam only needs 25 minutes to mark a paper. If they both start marking papers at 10:00 AM, at what time they will finish marking at the same time? (5)
- (C) Two bus tickets from Rawalpindi to Islamabad and three tickets from Rawalpindi to Murree cost Rs.770 but three tickets from Rawalpindi to Islamabad and two tickets from Rawalpindi to Murree cost Rs.730. What are the fares for cities Islamabad and Murree from Rawalpindi? (5)
- (D) *A* told *B* that *C* is his father's nephew. *D* is *A*'s cousin but not the brother of *C*. What relationship is there between *D* and *C*? (5)
- Q. No. 8.** (A) Divide Rs.500 between Arham, Mariam and Sarim so that Arham gets $\frac{2}{3}$ of what Mariam gets and Mariam gets $\frac{1}{4}$ of what Sarim gets. Find the share of each. (5)
- (B) A school has enough provision of food for 52 days. After 20 days a group of 400 students arrives and the food would have last for 24 days only. How many students are there in the school actually? (5)
- (C) A man walks 2km towards North. Then he turns to East and walks 10km. After this he turns to North and walks 3km. Again he turns towards East and walks 2km. How far is he from the starting point? (5)
- (D) In a certain code language COMPUTER is written as RFUVQNPC. How will MEDICINE be written in that code language? (5)

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(QNO-7)
(A)

Cost of meat = Rs. 500/kg

Cost of 5kg meat = 500×5
= Rs. 2500

Consumption tax @ 6% per kg = $500 \times 6\%$
= Rs. 30

Consumption tax for 5kg meat = 30×5
= Rs. 150

Total amount of money paid by man = $2500 + 150$
= Rs. 2650

(B)

Time taken by Ali to mark paper = 30 minutes

Time taken by Aslam to mark paper = 25 minutes

$$\begin{array}{r|l} 5 & 25-30 \\ \hline 2 & 5-6 \\ \hline 3 & 5-3 \\ \hline 5 & 5-1 \\ \hline & 1-1 \end{array}$$

Time taken to finish at same time = $5 \times 2 \times 3 \times 5$
= 150 minutes

150 minutes in hours = $\frac{150}{60} = 2.5$ hours

Since, both started at 10:00 AM. So, at 12:30 PM both will finish paper marking.

(c)

Let tickets from Rawalpindi to Islamabad = x

Let tickets from Rawalpindi to Murree = y

According to 1st condition,

$$2x + 3y = 770 \rightarrow \textcircled{1}$$

According to 2nd condition,

$$3x + 2y = 730 \rightarrow \textcircled{2}$$

Multiplying eq $\textcircled{1}$ by 3 and eq $\textcircled{2}$ by 2,

$$3(2x + 3y = 770)$$

$$6x + 9y = 2310 \rightarrow \textcircled{3}$$

$$2(3x + 2y = 730)$$

$$6x + 4y = 1460 \rightarrow \textcircled{4}$$

Subtracting eq $\textcircled{3}$ and $\textcircled{4}$,

$$\begin{array}{r} 6x + 9y = 2310 \\ \underline{6x + 4y = 1460} \\ \hline \end{array}$$

$$5y = 850$$

$$y = \frac{850}{5}$$

$$\boxed{y = 170 \text{ Rs.}}$$

Put $y = 170$ in eq (3),

$$6x + 9y = 2310$$

$$6x + 9(170) = 2310$$

$$6x = 2310 - 1530$$

$$6x = 780$$

$$x = \frac{780}{6}$$

6

$$x = \text{Rs. } 130$$

Answer

$$x = \text{Rs. } 130$$

$$y = \text{Rs. } 170$$

So, Fare from Rawalpindi to Islamabad = $x = \text{Rs. } 130$

Fare from Rawalpindi to Murree = $y = \text{Rs. } 170$

(D)

Solution:-

• C is nephew of A's father. It implied that C is cousin of A.

• D is A's cousin but not the brother of C.

• So, on the basis of above conditions, D is the sister of C.

→ Relationship between C and D:-

Sister and Brother
(D) (C)

QNO.8
(B)

Solution:-

Students	Days
x	32
$x+400$	24

Let x students need food for 52 days. After 20 days, remaining days food for x students will be,

$$52 - 20 = 32 \text{ days}$$

Number of students after arrival of 400 students = $x+400$

Food will last for = 24 days

So,

$$\frac{x+400}{x} = \frac{32}{24}$$

$$32x = 24(x+400)$$

$$32x = 24x + 9600$$

$$32x - 24x = 9600$$

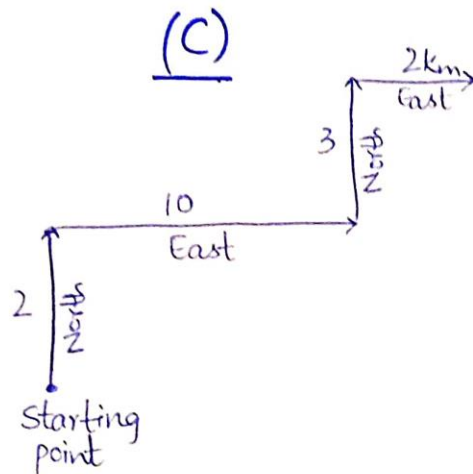
$$8x = 9600$$

$$x = \frac{9600}{8}$$

$$x = 1200 \text{ students}$$

Actually, 1200 students are there in the school.

Solution:-



Total distance covered towards North = $2 + 3 = 5$ km

Total distance covered towards South = 0 km

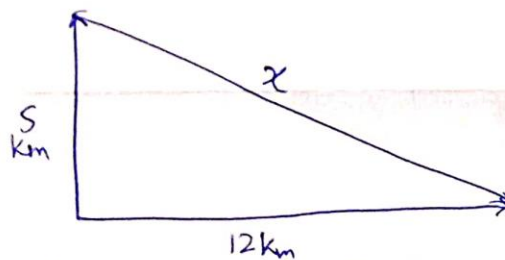
Difference = $N - S = 5 - 0 = 5$ km towards North

Total distance covered towards East = $10 + 2 = 12$ km

Total distance covered towards West = 0 km

Difference = $E - W = 12 - 0 = 12$ km towards

So,



According to Pythagoras theorem,

$$(\text{Hypotenuse})^2 = (\text{Perpendicular})^2 + (\text{Base})^2$$

$$x^2 = (5)^2 + (12)^2$$

$$x^2 = 25 + 144$$

$$x^2 = 169$$

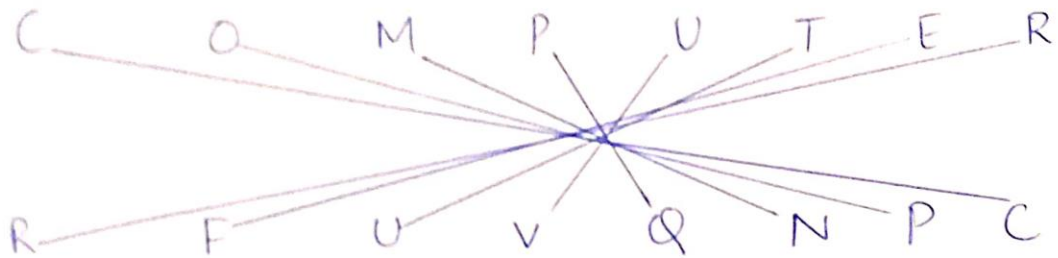
Taking square root on both sides,

$$\sqrt{x^2} = \sqrt{169}$$

$$x = 13 \text{ km}$$

So, the man is at the distance of 13 km from starting point.

(D)



According to this particular pattern,

- (i) Last alphabet becomes first and vice versa.
- (ii) The remaining alphabets are placed by moving one step forward.

So, Medicine will be written as,

M E D I C I N E

E O J D J E F M

~~Medicine = Efjdjefm~~

MEDICINE = EOJDJEFM

(A)

Solution:-

Let share of Sarim = x
According to given conditions,

$$\text{Share of Maryam} = \frac{1}{4}x = \frac{x}{4}$$

$$\text{Share of Arham} = \frac{21}{3} \times \frac{x}{4} = \frac{x}{6}$$

So,

$$\frac{x}{1} + \frac{x}{4} + \frac{x}{6} = 500$$

$$\frac{12x + 3x + 2x}{12} = 500$$

$$17x = 6000$$

$$x = \frac{6000}{17}$$

$$x = \text{Rs. } 352.94$$

$$\text{Share of Sarim} = x = \text{Rs. } 352.94$$

$$\text{Share of Maryam} = \frac{x}{4} = \frac{352.94}{4} = 88.24 \text{ Rs.}$$

$$\text{Share of Arham} = \frac{x}{6} = \frac{352.94}{6} = \text{Rs. } 58.82$$