

Q1

A)

1) 2, 3, 6, 4, 5, 80, 6, 3, 18

2) 1, 3, 4, 15, 25, 49

3) 2, 7, 10, 22, 18, 37, 26,

4) 34, 7, 37, 14, 40, 28, 43, 56

5) 5, 7, 11, 13, 17, 19

D:

Given data:

→ Let two numbers are
A and B

A is the greater number
B is the smaller number

According to the condition

$$A = 2B \quad \text{--- eq(1)}$$

Also

$$A + B = 96$$

or $A = 96 - B$ --- eq(2)

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comparing eq (1) & 2 we have

$$2B = 96 - B$$

$$2B + B = 96$$

$$3B = 96$$

$$B = \frac{96}{3}$$

$$B = 32 \quad \text{--- eq (3)}$$

Putting the value of B from eq (3) in eq (2) we have

$$A = 96 - B$$

$$A = 96 - 32$$

$$A = 64$$

Thus the required two numbers are 64 and 32

Cr

Given data

Brick size = 25 cm x 11.25 cm x 6 cm

Wall size = 8 m x 6 m x 22.5 cm

As $1 \text{ m} = 100 \text{ cm}$

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Converting wall size into
cm, we have.

$$= (8 \times 100) \text{ cm} \times (6 \times 100) \text{ cm} \times 22.5 \text{ cm}$$

$$= 800 \text{ cm} \times 600 \text{ cm} \times 22.5 \text{ cm}$$

Calculating area of wall

$$A = l \times w \times T$$

$$= 800 \text{ cm} \times 600 \text{ cm} \times 22.5 \text{ cm}$$

$$= 10,800,000 \text{ cm}^3$$

And

$$\text{Area of brick} = 25 \text{ cm} \times 11.25 \text{ cm} \times 6 \text{ cm}$$
$$= 1,687.5 \text{ cm}^3$$

$$\text{Calculating bricks} \rightarrow \frac{\text{Area of wall}}{\text{Area of brick}} = \frac{10,800,000 \text{ cm}^3}{1,687.5 \text{ cm}^3}$$
$$= 6400 \text{ bricks required}$$

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(B)

Given data

$$L.C.M \times H.C.F = 296$$

As we know that

$$A \times B = L.C.M \times H.C.F$$

$$\text{So } A \times B = 296 = \boxed{A = \frac{296}{B}} \text{ --- eq (1)}$$

$$\text{Also } A : B = 2 : 3$$

$$= \frac{A}{B} = \frac{2}{3}$$

$$= \boxed{A = \frac{2}{3} \times B} \text{ --- eq (2)}$$

Comparing eq (1) & (2)

$$\frac{296}{B} = \frac{2}{3} \times B$$

$$= \frac{296 \times 3}{2} = B^2$$

$$= \frac{888}{2} = B^2 = \boxed{444 = B^2}$$

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TAKING SQUARE ROOT

$$\sqrt{444} = \sqrt{B^2}$$

$$B = 21.07$$

putting in eq, ①

$$A = \frac{296}{B} = \frac{296}{21.07} = 14.04$$

Thus,

$$A = 14.04, B = 21.07$$

Also

$$A \times B = 296$$

$$14.04 \times 21.07 = 296$$

Ans

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Q 2

(A)

Given data

mixture = 60 litre.

Milk : Water = 2 : 1

first we calculate the quantity of water & milk, according to the first condition.

Total parts = 2 + 1 = 3

$$\begin{aligned} \text{Milk quantity} &= \frac{60 \text{ l} \times 2}{3} \\ &= 40 \text{ l} \quad \text{--- eq (1)} \end{aligned}$$

$$\begin{aligned} \text{Water quantity} &= \frac{60 \text{ l} \times 1}{3} \\ &= 20 \text{ l} \quad \text{--- eq (2)} \end{aligned}$$

Now the ratio is to be changed,
Water : milk = 2 : 1

Now

$$\text{Milk} = \frac{60 \text{ l} \times 1}{3} = 20 \text{ l} \quad \text{--- eq (3)}$$

$$\text{Water} = \frac{60 \text{ l} \times 2}{3} = 40 \text{ l} \quad \text{--- eq (4)}$$

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comparing all equations (eq ① & eq ②)
we see " that we have
to add 20 l of water more
to change the ratio to 1:2

B) Given data:

Let Age of father = x
Age of son = y

According to condition

Present ages = $x = 2y$ - eq ①

Ten years before we had
 $(x - 10) = 3(y - 10)$

= $x - 10 = 3y - 30$

= $x = 3y - 30 + 10$

= $x = 3y - 20$ eq ②

comparing eq ① & eq ②

= $2y = 3y - 20$

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$$20 = 3y - 2y$$

$$\boxed{y = 20} \quad \text{eq (3)}$$

putting eq (3) in eq (1)

$$x = 2y = 2(20)$$

$$\boxed{x = 40 \text{ years}}$$

So

$$\begin{aligned} \text{father} &= 40 \text{ years} \\ \text{son} &= 20 \text{ years} \end{aligned}$$

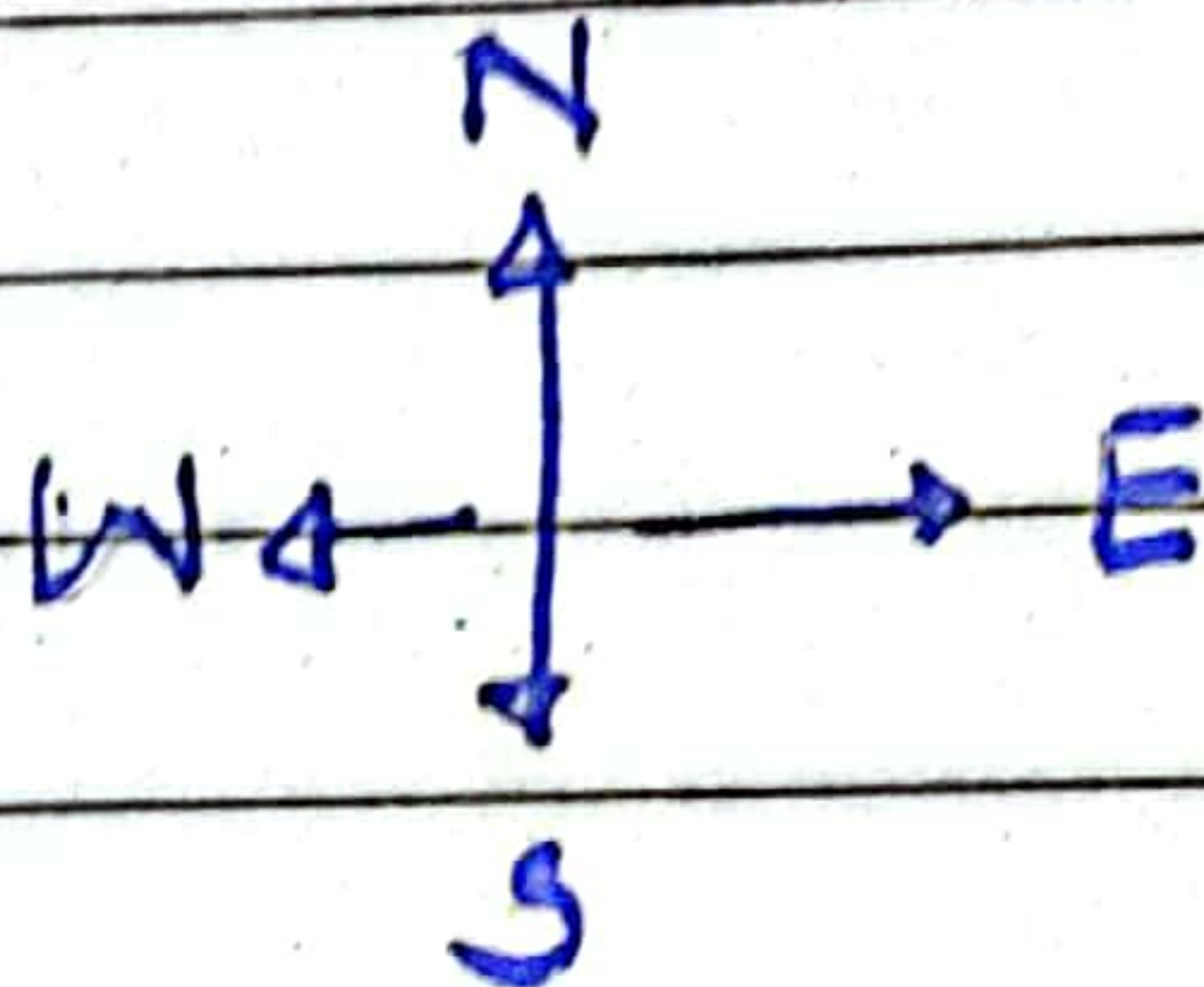
$$\begin{aligned} \text{father: son} &= 40 : 20 \\ &= 2 : 1 \end{aligned}$$

Answer

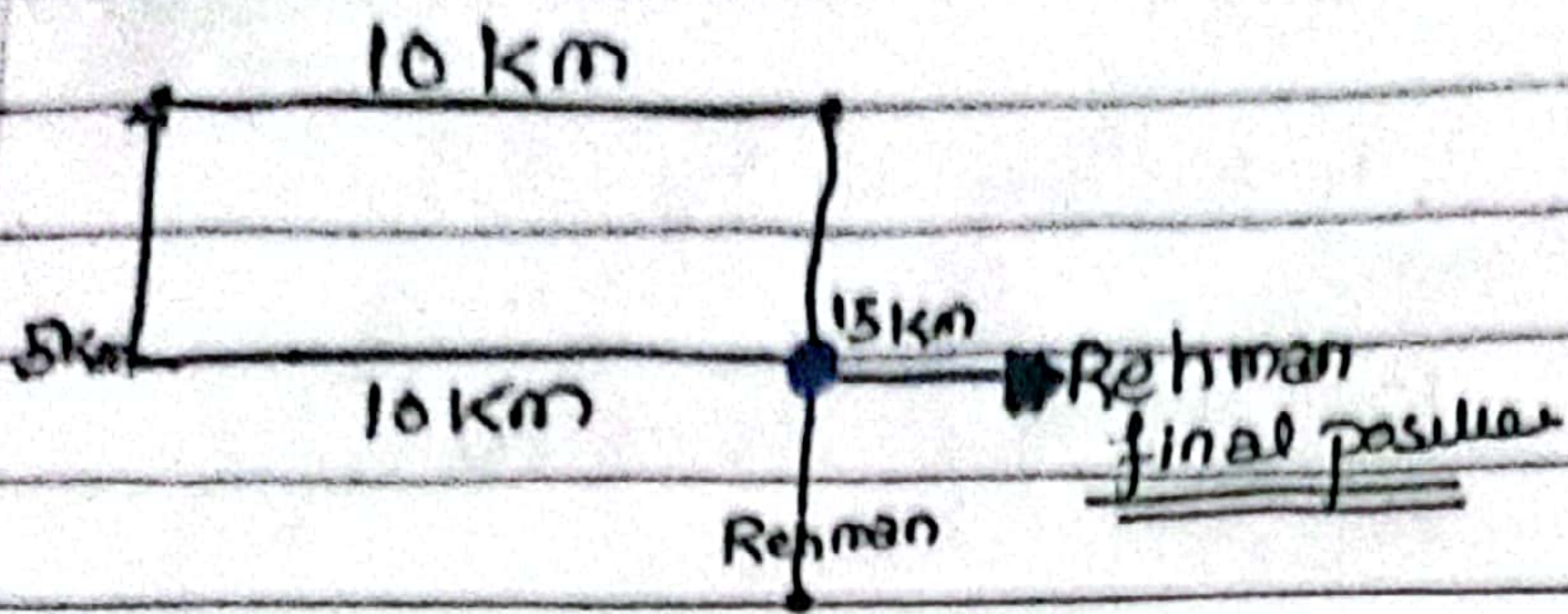
Q:

Given data:

Rehman travels



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A) North direction

B) 10 km from house

C) 40 km

D:-

Given data:-

Train 1 = A

Train 2 = B

$$\frac{A}{B} = \frac{7}{8} \quad \text{--- eq. (1)}$$

Speed of train

$$V = \frac{S}{t} = \frac{400 \text{ km}}{4 \text{ hr}} = \frac{100 \text{ km}}{\text{hr}}$$

So speed of B = 100 km/hr --- eq. (2)

putting eq. (2) in eq. (1)

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$$A : B = 7 : 8$$

$$A : 100 \text{ km/hr} = 7 : 8$$

$$\frac{A}{100 \text{ km/hr}} = \frac{7}{8}$$

$$A \times 8 = 7 \times 100 \text{ km/hr}$$

$$A \times 8 = 700 \text{ km/hr}$$

$$A = \frac{700 \text{ km/hr}}{8}$$

$$A = 87.5 \text{ km/hr}$$

in 4 hours

$$A = 87.5 \text{ km/hr} \times 4 \text{ hours}$$

$$A = 350 \text{ km/hr in 4 hours}$$