

VIII Test-7

- 1) If 24 trousers of equal size can be prepared in 54 metres of cloth, what length of cloth is required for each trouser?
 - 2) A train covers $383\frac{4}{5}$ km in $4\frac{3}{4}$ hours. Find its average speed.
 - 3) How many uniforms can be made from $94\frac{1}{2}$ m of cloth, if each uniform needs $2\frac{1}{4}$ m cloth?
 - 4) The area of rectangle is 610 m^2 . If its breadth is $16\frac{2}{3}$ m, what is its length?
 - 5) The perimeter of an isosceles triangle is 18 cm. If one of the equal sides is $5\frac{3}{4}$ cm long, find the measure of the third side.
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VIII Test-7 (Answers)

1) Total length of the cloth = 54 metres

No. of trousers need to prepare = 24

∴ length of cloth required for 1 trouser

$$= \frac{54}{24} = \frac{9}{4} = 2\frac{1}{4} \text{ m}$$

$$\begin{array}{r} 2 \\ 4 \overline{) 98} \\ \underline{8} \\ 1 \end{array}$$

2) Distance covered by train = $383\frac{4}{5}$ km

$$= \frac{1919}{5} \text{ km}$$

Time taken = $4\frac{3}{4}$ hours = $\frac{19}{4}$ hrs

$$\begin{array}{r} 80 \\ 5 \overline{) 404} \\ \underline{40} \\ 4 \end{array}$$

∴ Average speed = $\frac{\text{Distance}}{\text{Time}} = \frac{1919}{5} \div \frac{19}{4}$

$$= \frac{1919}{5} \times \frac{4}{19}$$

$$= \frac{404}{5} = 80\frac{4}{5} \text{ km/hr}$$

3) Total length of cloth = $94\frac{1}{2}$ m = $\frac{189}{2}$ m

length of cloth required for 1 uniform = $2\frac{1}{4}$ m

$$= \frac{9}{4} \text{ m}$$

∴ No. of uniforms made = $\frac{189}{2} \div \frac{9}{4}$

$$= \frac{189}{2} \times \frac{4}{9}$$

$$= 21 \times 2 = 42 \text{ uniforms}$$

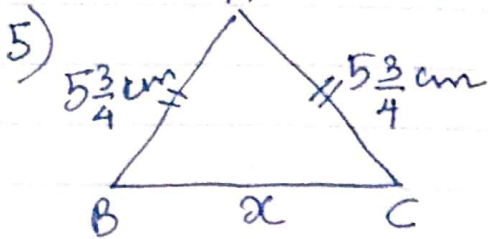
4) breadth of the rectangle = $16\frac{2}{3}$ m = $\frac{50}{3}$ m
Area of the rectangle = 610 m^2

$$\Rightarrow \text{length} \times \text{breadth} = 610$$

$$\Rightarrow \text{length} \times \frac{50}{3} = 610$$

$$\therefore \text{length} = \frac{610 \times 3}{50} = \frac{183}{5} = \underline{\underline{36\frac{3}{5} \text{ m}}}$$

$$\begin{array}{r} 36 \\ 5 \overline{) 183} \\ \underline{15} \\ 33 \\ \underline{30} \\ 3 \end{array}$$



$$\text{Perimeter} = 18 \text{ cm}$$

$$\Rightarrow 5\frac{3}{4} + 5\frac{3}{4} + x = 18$$

$$\Rightarrow \frac{23}{4} + \frac{23}{4} + x = 18$$

$$\Rightarrow \frac{46}{4} + x = 18$$

$$\therefore x = \frac{18 \times 2}{1 \times 2} - \frac{23}{2}$$

$$= \frac{36 - 23}{2}$$

$$= \frac{13}{2} = \underline{\underline{6\frac{1}{2} \text{ cm}}}$$

$$\begin{array}{r} 6 \\ 2 \overline{) 13} \\ \underline{12} \\ 1 \end{array}$$

Hence the measure of the third side = $6\frac{1}{2} \text{ cm}$.