



Exercise 10D

Q17

Answer :

(c) 90°

Ratio of the angles of a triangle is 3:1: 2

Let x be any number such that the three angles are $(3x)^\circ$, $(1x)^\circ$ and $(2x)^\circ$.

We know, the sum of the angles of a triangle is 180° .

$$3x + 1x + 2x = 180$$

$$\Rightarrow 6x = 180$$

$$\Rightarrow x = \frac{180}{6} = 30$$

$$\therefore (3x)^\circ = (3 \times 30)^\circ = 90^\circ$$

$$(1x)^\circ = (1 \times 30)^\circ = 30^\circ$$

$$(2x)^\circ = (2 \times 30)^\circ = 60^\circ$$

The measure of the largest angle is 90° .

Q18

Answer :

(b) 45 m

Length:Breadth = 5:4

Let x be any number such that the length and the breadth are $5x$ and $4x$, respectively.

$$\text{Now, } 4x = 36$$

$$x = \frac{36}{4} = 9$$

$$\text{Length} = 5x = 5 \times 9 = 45 \text{ m}$$

Q19

Answer :

(a) 13 : 15

$$\text{Speed} = \frac{\text{Distance}}{\text{Time}}$$

$$\text{Speed of the bus} = \frac{195 \text{ km}}{3 \text{ hr}} = 65 \text{ km/hr}$$

$$\text{Speed of the train} = \frac{300 \text{ km}}{4 \text{ hr}} = 75 \text{ km/hr}$$

$$\text{Ratio} = \frac{65}{75} = \frac{65 \div 5}{75 \div 5} = \frac{13}{15} = 13:15$$

Q20

Answer :

(c) Rs 198

$$\text{Cost of 5 bars of soap} = \text{Rs } 82.50$$

$$\text{Cost of 1 bar of soap} = \frac{82.50}{5} = \text{Rs } 16.5$$

$$\text{Cost of 12 (1 dozen) bars of soap} = 16.5 \times 12 = \text{Rs } 198$$

Q21

Answer :

(b) Rs 750

$$\text{Cost of 30 packets of 8 pencils each} = \text{Rs } 600$$

$$\text{Cost of 1 packet of 8 pencils} = \frac{600}{30} = \text{Rs } 20$$

$$\text{Cost of 1 pencil} = \text{Rs } \frac{20}{8}$$

$$\text{Cost of 1 packet of 12 pencils} = 12 \times \frac{20}{8} = \frac{240}{8} = \text{Rs } 30$$

$$\text{Cost of 25 packets of 12 pencils each} = 25 \times 30 = \text{Rs } 750$$

Q22

Answer :

(a) Rs 344

Cost of rail journey of 75 km = Rs 215

Cost of rail journey of 1 km = Rs $\frac{215}{75}$

Cost of rail journey of 120 km = $120 \times \frac{215}{75} = \frac{25800}{75} = \text{Rs } 344$

Q23

Answer :

(d) 8

Let the third term be x.

Then, we have:

12:21::x:14

We know:

Product of means = Product of extremes

$$21x = 12 \times 14$$

$$\Rightarrow 21x = 168$$

$$\Rightarrow x = \frac{168}{21} = 8$$

$$21$$

The third term is 8

Q24

Answer :

(b) 15 h

Time taken by 10 boys to dig a pitch = 12 hours

Time taken by 1 boy to dig a pitch = $12 \times 10 = 120$ hours (less boys means more time)

Time taken by 8 boys to dig a pitch = $\frac{120}{8} = 15$ hours

8

***** END *****