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 $(3x)°$, $(1x)°$ and $(2x)°$.

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

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

$\Rightarrow 6x = 180$

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

$\therefore (3x)° = (3 \times 30)° = 90°$

$(1x)° = (1 \times 30)° = 30°$

$(2x)° = (2 \times 30)° = 60°$

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.

Now , 4x = 36

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

Length = 5x = 5 × 9 = 45 m

Q19

Answer :

(a) 13 : 15

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

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

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

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

Q20

Answer :

(c) Rs 198

Cost of 5 bars of soap = Rs 82.50

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

Cost of 12 (1 dozen) bars of soap = 16.5 × 12 = Rs 198

Q21

Answer :

(b) Rs 750

Cost of 30 packets of 8 pencils each = Rs 600

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

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

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

Cost of 25 packets of 12 pencils each = 25 × 30 = Rs 750

Q22

Answer :

(a) Rs 344

Cost of rail journey of 75 km = Rs 215

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

Cost of rail journey of 120 km = $120 \times \dfrac{215}{75} = \dfrac{25800}{75}$ = 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

21*x* = 12 × 14

⇒ 21*x* = 168

⇒ *x* = $\dfrac{168}{21}$ = 8

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 × 10 = 120 hours   (less boys means more time)

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

********** END *********