

(SECTION – B)

- Q.6. (a) A man is now 3 times as old as his son. In ten (10) years time, the sum of their ages will be 76. How old was the man when his son was born? (5)
- (b) How many tiles of 20cm^2 will be required to have a footpath 1m wide carried around the outside of grassy plot 24m long and 14m broad? (5)
- (c) Mr. Faheem has dinner with his family at a restaurant which offers a 10% discount on food. The marked price of the food that they order was Rs.15000/-. Given that there was a service charges of 10% and GST is 17%, calculate the total amount of money he has to pay. (5)
- (d) Mr. Khawaja walked for 45 minutes at the rate of 3km/h and then ran for half an hour at a certain speed. At the end of that time he was 6km away from the starting point. How fast did he run? (5)(20)

Section-B

Date: _____

Day: _____

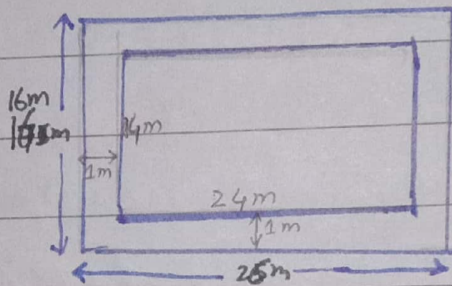
Q6

(b)

Tiles of 20cm^2 required for 1 meter wide footpath around the 24m long and 14m broad grassy plot

Solution

Area of footpath = Total Area - Area of grassy plot



Area of grassy plot = Length \times Width

$$= 24 \times 14$$

$$= \boxed{336\text{m}^2}$$

Total Area of plot = ^{Total} Length \times Total Width

$$= 15 \times 25$$

$$= \boxed{416\text{m}^2}$$

Area of footpath = $(416 - 336)\text{m}^2$

$$= 80\text{m}^2$$

Total Tiles required = $\frac{\text{Area of footpath}}{\text{Area of Tile}}$

$$= \frac{80\text{m}^2}{20\text{cm}^2}$$

$$= \frac{80\text{m}^2 \times 100 \times 100^5}{20\text{m}^2} \quad \therefore \text{Convert cm into m}$$

$$= 40000$$

(Number of Tiles required = 40000)

Answer

(c) Total amount of money paid by Faheem for dinner at a restaurant

Given Data

Marked Price of the Food = RS 15000/-

Discount on the Food = 10%

Service Charges on the Food = 10%

GST on the Food = 17%

Required

Total Money Paid by Faheem = ?

Solution

Total Discount on food = Marked Price \times Discount

$$= 15000 \times \frac{10}{100}$$

Discount = RS 1500/-

Price after Discount = 15000 - 1500

= (RS 13500/-)

Service charges on food = $13500 \times \frac{10}{100}$

$$= 1350/-$$

GST on food = $13500 \times \frac{17}{100}$

$$= 2295/-$$

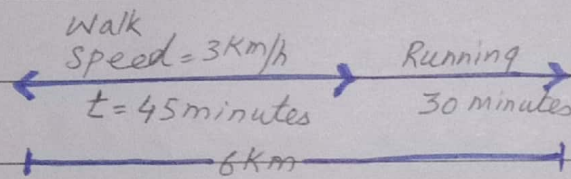
Total Amount paid for dinner = Price after discount + Service Charges + GST

$$= 13500 + 1350 + 2295$$

$$= \text{RS } 17145$$

Total Amount paid by Faeem for dinner is RS 17145/-

To find the Fastness/Speed of run of Mr. Khawaja



Distance covered while walking $\Rightarrow (S)$

$$S = \text{Speed} \times \text{time taken}$$

$$= 3 \text{ km/hour} \times 45 \text{ minutes}$$

$$= \frac{3 \text{ km}}{60 \text{ minutes}} \times 45 \text{ minutes}$$

$$= \frac{3 \times 45}{60} \text{ km} = \frac{9}{4} \text{ km}$$

$$= \boxed{2.25 \text{ km}}$$

Distance left for running in 45 minutes =

$$\text{Total Distance} - \text{Walked Distance}$$

$$= 6 \text{ km} - 2.25 \text{ km}$$

$$= 3.75 \text{ km}$$

Date: _____

Time taken while running = 30 minutes = $\frac{30}{60}$ hours
= 0.5 hours

~~Walking Dis~~

Running Speed = $\frac{\text{Distance Covered}}{\text{Time taken}}$

$$= \frac{3.75 \text{ Km}}{\frac{3}{4} \text{ hours}}$$
$$= \frac{3.75 \times 4 \text{ Km}}{3} \text{ /hour}$$

$$= \frac{3.75 \text{ Km}}{0.5 \text{ hours}} = 7.5 \text{ Km/hour}$$

~~Q7~~
Khwaja ran at the speed of 7.5 Km/hour.

Q8

(b)

Finding num