

Section - I I

Q.No. 6

A farmer cut a 300 ft. fence into two pieces of different How long are the two pieces

Length of a fence = 300 ft

Let the length of smaller piece = x

Longer piece length = $4x$

Length of two pieces = ?

According to the $4x + x = 300$ ft

~~Equation~~ Question

$$5x = 300$$

$$5x = 300$$

Divide both sides by 5

$$\frac{5x}{5} = \frac{300}{5} \Rightarrow x = 60$$

Smaller piece length = 60 ft

Larger piece length = $4(60) = 240$ ft

b

$$\text{Length of rectangle} = 2x + 3$$

$$\text{Width} = x$$

$$\text{Perimeter} = 20 \text{ inch}$$

$$\text{Dimensions} = ?$$

$$\text{Perimeter} = 2(L + W)$$

$$20 = 2(2x + 3 + x)$$

$$20 = 2(3x + 3)$$

$$20 = 6x + 6$$

$$\text{Subtract } 6 \text{ from both sides} \quad 20 - 6 = 6x$$

$$14 = 6x$$

$$x = \frac{14}{6} = \frac{7}{3} = 2.33$$

$$\text{Width} = 2.33 \text{ inch}$$

$$\text{Length of rectangle} = 2(2.33) + 3$$

$$= 4.66 + 3 = 7.66 \text{ Inch}$$

d: Let the one number is $= 3x$ numbers $= ?$

2nd number $= 2x$

According to the question

$$\frac{3x+2}{2x+6} \times \frac{4}{5}$$

by cross multiplication

$$5(3x+2) = 4(2x+6)$$

$$15x+10 = 8x+24$$

$$15x - 8x = 24-10$$

$$7x = 14$$

Divide both sides by 7

$$\frac{7x}{7} = \frac{14}{7} \Rightarrow 7x = 2$$

$$1st \text{ number} = 3(2) = 6$$

$$2nd \text{ number} = 2(2) = 4$$

C. Match won = 60%. Total matches = ?

Match lost = 24

Let the matches play are x

$$60\% \text{ of } x + 24 = x$$

$$\frac{60}{100} \times x + 24 = x$$

$$\frac{6x}{10} + 24 = x$$

$$\frac{6x + 240}{10} = x$$

Multiply both sides by 10 we get

$$6x + 240 = 10x$$

$$240 = 10x - 6x$$

$$\frac{240}{4} = 4x$$

Divide both sides by 4 $\Rightarrow x = 60$

Hence 60 matches are played in a year.

Q. No. 7

a. Total seats = 400 seats

occupied seats = 325 seats

4

Percent capacity = ?

$$\text{Percent capacity} = \frac{325}{400} \times 100$$

Percent capacity = 81.25%

b.

30 persons use 40 kg sugar in 10 days

days = ?

If 80 persons will use 320 kg sugar

days

Sugar

Persons

↑ 10

↑ 40 kg

130

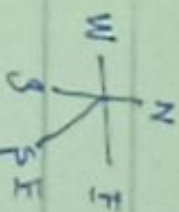
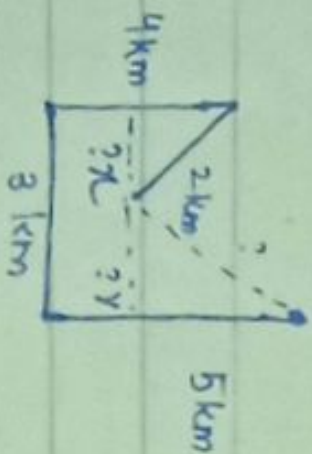
$$\frac{x}{10} = \frac{3 \frac{8}{10}}{40} \times \frac{30}{80}$$

$$x = \frac{8 \times 3 \times 10}{8}$$

$$x = 30 \text{ days}$$

Hence 80 persons use 320kg in 30 days.

C - A crow travel south 5 km and the 3 km west



~~Let~~ First Find x

$$x^2 = (2)^2 + (4)^2 = 4 + 16$$

d -

$$r = 10 \text{ cm}$$

$$\text{height} = 36 \text{ cm}$$

$$V = \frac{2}{7} r^2 h = \frac{2 \cdot 2}{7} (10)^2 (36)$$

$$V = 3.14 \times 100 \times 36$$

$$V = 314 \times 36$$

$$V = 11304 \text{ cm}$$