General instructions for Students: Whatever be the notes provided, everything must be copied in the Mathematics copy and then do the HOMEWORK in the same copy.

CLASS – VIII 9 DIRECT AND INVERSE VARIATION MATHS

DIRECT VARIATION :

Two quantities x and y are said to be in direct variation if

$$\frac{x}{y} = k, \quad \text{where k is constant of variation.}$$

EXERCISE – 9.1

3. If 8 metres cloths Rs. 250, find the cost of 5.8 metres of the same cloths.

Solution :

Cloths(in metre)	8	5.8
Cost(in Rs.)	250	x

$$\therefore \frac{8}{250} = \frac{5.8}{x} \implies x = \frac{250 \times 5.8}{8} = \text{Rs. } 181.25 \text{ Ans.}$$

7. If the thickness of the pile of 12 cardboards sheets is 45 mm, then how many sheets of the same cardboard would be 90 cm thick?

Solution :

No. of sheets	12	x
Thickness(mm)	45	90 cm = 900

$$\therefore \frac{12}{45} = \frac{x}{900} \implies x = \frac{12 \times 900}{45} = 240 \text{ sheets Ans.}$$

10. Anita has to drive from village A to village B. She measures a distance of 3.5 cm between these villages on the map. what is the actual distance between the villages if the map scale is 1 cm = 20 km?

Solution :

Scale (in cm)	1	3.5
Distance (in km)	20	x

$$\therefore \quad \frac{1}{20} = \frac{3.5}{x} \quad \Longrightarrow \quad x = \frac{20 \times 3.5}{1} \quad = \quad 70 \text{ km} \quad \text{Ans.}$$

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HOMEWORK

EXERCISE – 9.1

QUESTION NUMBERS : 1(i), (ii); 5, 6, 9 and 11

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INVERSE VARIATION

Two quantities x and y are said to be in inverse variation if

$$xy = k, \quad \text{where k is constant of variation.}$$

EXERCISE – 9.2

4. A packet of sweets was distributed among 20 children and each of them received 4 sweets. How many sweets will each child get, if the number of children is reduced by 4?

Solution :

No of children	20	16
No of sweets	4	x

$$\therefore \quad 20 \times 4 = 16 \times x \quad \Longrightarrow \quad x = \frac{20 \times 4}{16} \quad = \quad 5 \quad \text{Sweets} \quad \text{Ans.}$$

8. A contractor undertook a contract to complete a part of stadium in 9 months with a team of 560 persons. Later on, it was required to complete the job in 5 months. how many extra persons should he employ to complete the work?

Solution :

No of persons	560	x
Time (in months)	9	5

$$\therefore \quad 560 \times 9 = x \times 5 \quad \Longrightarrow \quad x = \frac{560 \times 9}{5} \quad = \quad 1008$$

Extra persons should he employ to complete the work $= 1008 - 560 = 448$ Ans.

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HOMEWORK

EXERCISE – 9.2

QUESTION NUMBERS : 2, 3, 6 7 and 11

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