



Direct and Inverse Variations Ex 10.2 Q12

Answer :

Let the time taken by 5 spraying machines to finish a painting job be x minutes.

Number of machines	3	5
Time (in minutes)	60	x

Since the number of spraying machines and the time taken by them to finish a painting job are in inverse variation, we have :

$$3 \times 60 = 5 \times x$$

$$\Rightarrow 180 = 5x$$

$$\Rightarrow x = \frac{180}{5}$$

$$= 36$$

Thus, the required time will be 36 minutes.

Direct and Inverse Variations Ex 10.2 Q13

Answer :

Let x be the number of new members in the group.

Number of members	3	x
Number of days	30	18

Since more members can finish the wheat in less number of days, it is a case of inverse variation.

Therefore, we get :

$$3 \times 30 = x \times 18$$

$$\Rightarrow 90 = 18x$$

$$\Rightarrow x = \frac{90}{18}$$

Thus, the number of new members in the group $= 5 - 3 = 2$

Direct and Inverse Variations Ex 10.2 Q14

Answer :

Let x be the number of cows that can graze the field in 10 days .

Number of days	16	10
Number of cows	55	x

Since the number of cows and the number of days taken by them to graze the field are in inverse variation, we have :

$$16 \times 55 = 10 \times x$$

$$\Rightarrow x = \frac{16 \times 55}{10}$$

$$= 88$$

\therefore The required number of cows is 88

Direct and Inverse Variations Ex 10.2 Q15

Answer :

Let the number of men required to reap the field in 15 days be x .

Number of days	35	15
Number of men	18	x

Since the number of days and the number of men required to reap the field are in inverse variation, we have :

$$35 \times 18 = 15 \times x$$

$$\Rightarrow x = \frac{35 \times 18}{15}$$

$$= 42$$

Thus, the required number of men is 42.

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