8

Unitary Method

Q1. Find whether the following are situations of direct variation or inverse variation. Write 'D' for situations of direct variation and 'I' for situations of inverse variation.

a. More the number of working days, more the salary : _____

b. Lesser the number of working days, lesser the work done : _____

c. More the number of employees, lesser the time taken to get a work done : _____

d. More the number of employees, greater the amount of work done : _____

e. Greater the speed of a car, lesser the time taken to cover a particular distance : _____

Q2. If a girl takes 5 steps to cover a distance of 1.05 m, find the distance covered by the girl in 20 steps.

Answer: _____

Q3. 124 students are staying in a hostel and the food lasts for 35 days. Few more students joined the hostel and now the food lasts for 28 days. How many more students joined the hostel?

Answer: _____

Q4. 7 pipes when opened simultaneously fill a tank in 84 hours. In how much time will 12 pipes fill the tank?

Answer: _____

Q5. Jatin takes 5 days to paint a house. Satish paints the same house in 6 days. If both of them work together, in how many days will they finish painting the house?

Answer: _____

Q6. Sudha and Lalita clean a house in 6 hours. When Sudha cleans the house alone, she finishes her work in 10 hours. How much time will Lalita take to clean the house without anybody's help?

Answer: _____

Q7. Srishti paints a picture in 18 minutes. Swati takes 20 minutes to paint the same picture. Both of them started painting a picture together. After 5 minutes Srishti had to leave. In how much time will Swati complete the remaining picture?

Answer: _____

Q8. Match the speed in km/hr to its equivalent in m/sec:

Speed in km/hr	Speed in m/sec
45 km/hr	25 m/sec
3.6 km/hr	13.75 m/sec
90 km/hr	12.5 m/sec
49.5 km/hr	1 m/sec

Q9. Calculate the speed and fill in the blanks in the table given below:

Distance	Time	Speed (in m/sec)
32.4 km	2 hours	_____
70 m	50 seconds	_____
5.4 km	30 minutes	_____

Q10. Yellow coloured flags are kept after every 10 m on the running track. The athletes have to run and get as many flags as they can within six minutes. If Shilpa ran at 3 km/h and Surbhi ran at 1.25 m/sec, how many flags will each of them have at the end of six minutes?

Answer: (a) Number of flags Shilpa has : _____

(b) Number of flags Surbhi has : _____

Answers

1. a. D; b. D; c. I; d. D; e. I
2. 4.2 m
3. 31 students
4. 49 hours
5. $2\frac{8}{11}$ days
6. 15 hours
7. $9\frac{4}{9}$ minutes
8.

Speed in Km/h	Speed in m/sec
45 km/hr	12.5 m/sec
3.6 km/h	1 m/sec
90 km/h	25 m/sec
49.5 km/h	13.75 m/sec

9.

Distance	Time	Speed (in m/sec)
32.4 km	2 hours	4.5 m/sec
70 m	50 seconds	1.4 m/sec
5.4 km	30 minutes	3 m/sec

10. a. 30 flags; b. 45 flags