ASSIGNMENT
CHAPTER-13
DIRECT AND INVERSE PROPORTION

1. 6 pipes are required to fill a rank in 1 hour 20 minutes. How long will it take if only 5 pipes of the same type are used?

2. There are 100 students in a hostel. Food provision for them is for 20 days. How long will these provisions last, if 25 more students join the group?

3. If 15 workers can build a wall in 48 hours. How many workers will be required to do the same work in 30 hours?

4. The principal sanctioned a certain amount to the librarian to purchase some Mathematics books for the school library. She could buy 80 books casting Rs 90 each from the local book seller. There she approached to the publisher who offered her a 20% discount, Find the number of copies of Mathematics books which she could buy from the publisher for the sanctioned money.

5. . In a PG House, the food provision for 20 persons is for 10 days. How long would the food provision last if there were 5 more persons in that PG house?

6. A machine fills 540 bottles in six hours. How many bottles will it fill in five hours?

7. Jagmeet has a road map with a scale of 1 cm = 20 km. He drives on a road for 72 km. What would be his distance covered in the map?

8. A contractor estimates that 5 persons complete a task in 4 days. If he uses 4 persons instead of 5, how long should they take to complete the task?

9. A school has 9 periods a day each of 50 minutes duration. How many period will there be, if the duration of every period is reduced by 5 minutes?

10. A machine can fill 420 bottles of mineral water in 3 hours. How many bottles can be filled in 5 hours?

11. In a model of a ship. The mast is 9 cm high, while the mast of the actual ship is 12 m high.. If the length of the model ship is 21 cm, then how long is the actual ship?

12. A 10 m 50 cm high vertical pole casts a shadow 6 m long. Find at the same time the length of the shadow cast by another pole 5 m 60 cm high.

13. A loaded truck travels 168 km in 5 hours. How far can it travel in 25 minutes?

14. A farmer has enough food to feed 30 animals in his cattle-fret for 4 days, How long would the food last if there were 10 less animals in his farm?

15. Which of the following is true for a ratio?
   (a) the quantities are always in the same unit.
   (b) the quantities may be in different unit.
   (c) the quantities are always in different units.
   (d) none of the above.

16. If 20 bottles can he packed in 15 boxes. Then how many bottles of the same batch can be packed in each box when there are 25 boxes?

17. A car lakes 1.5 hours to reach a destination by travelling at the speed of 80 km/h. How long will it rake when the car travels at the steed of 60 km/hr?

18. A school has 9 periods a day each of 40 minutes duration. How long would each period be, if the school has 8 periods a day, assuming the number of school-hours to be the same?