Exercise 7.3

answers on p. 429

1. A car used 35.5 l of petrol for a journey of 426 km. How much petrol would it use for a journey of 600 km?

2. A car travelling at a uniform speed started at noon and covered the first 150 km of a journey by 3.00 p.m. Find the time when it had completed the whole journey of 600 km.

3. Samad's normal pay for working 42 hours a week is \$630. He is paid at a double rate when he works overtime. Find his total earnings if he works 48 hours a week.

4. A carpet, measuring 4 m by 2.5 m, costs \$86. Find the cost of a carpet of the same quality, measuring 5 m by 3 m.

5. If 3 men can load a lorry of goods in 2 h, how long will it take (**a**) 6 men, (**b**) 5 men, and (**c**) 2 men, to load the lorry of goods if they work at the same rate?

6. If 5 men can complete a job in 2 weeks, how long will it take 10 men to complete the same job if they work at the same rate?

7. A piece of work can be completed in 30 days by 10 men. If the work is to be completed 5 days earlier, how many more men are needed? (Assume that the men work at the same rate.)

8. If 9 men can complete a job in 4 days, how long will 8 men take to complete the same job, assuming that all the men are working at the same rate?

9. The wages of 6 men working for 5 hours amount to \$480. Find the wages of 10 men working for 8 hours.

10. Working 8 hours a day, 48 men can complete a job in 1 week. How many men working 6 hours a day will complete the same job in 16 days?

11. If 125 kg of food is sufficient for 24 soldiers for 5 days, how long will the food last for 30 soldiers?

12. At noon, car A started to travel at a uniform speed from town X to town Y which was 60 km away from town X. One and a half hours later, car B started to travel at the same uniform speed as car A from town Y to town X. They passed each other at 3.00 p.m. What distance had they each travelled when they passed each other?

13. A cyclist took 45 min to cycle uphill. He then took 30 min to cycle the same distance downhill. The difference between their average speeds was 4 km/h. At what speed did he cycle uphill?

14. A car travelling at 60 km/h for 3 h uses 9 l of petrol. How much petrol will be needed when it travels for 4 h at 40 km/h?

15. 14 men took 6 h 40 min to complete a certain job.
    (**a**) How long will it take 8 men, working at the same rate, to complete the same job?
    (**b**) If 2 of the 8 men leave the job after working for 1 h, how long will it take the remaining 6 men working at the same rate to complete the job?