DIRECT AND INVERSE PROPORTIONS

TIME, DISTANCE AND SPEED

EXERCISE

Q.1 A tyre has two punctures. The first puncture alone would have made the tyre flat in 9 minutes and the second alone would have done it in 6 minutes. If air leaks out at a constant rate, how long does it take both the punctures together to make if flat?

(A) $1\frac{1}{2}$ minutes (B) $3\frac{1}{2}$ minutes

(C) $3\frac{3}{5}$ minutes (D) $4\frac{1}{4}$ minutes

Q.2 Three taps take 6 hours, 8 hours and 12 hours respectively to fill a tank. How long will it take for all three taps together to fill the tank?

Q.3 16 men can do a piece of work in 7 days. How long will it take 14 men to do the same work?

Q.4 Ramesh pours 10^5 granules of sand per second in a bottle and it takes him 320 days to fill it. How many days will it take to fill that bottle if he pours 10^6 granules per second?

Q.5 A car moving from city A to city B takes $8\frac{1}{2}$ hours. If the distance between the cities is 425 km, find the speed of the car.

Q.6 What is the distance covered by a car at 73 kmph in $5\frac{1}{2}$ hours?

Q.7 Two trains start from the same station in the same direction but with a gap of one hour. The earlier train travels at 80 $\frac{\text{km}}{\text{h}}$ while the second train travels at 95 $\frac{\text{km}}{\text{h}}$. When will the second train overtake the first?

Q.8 How long will a train 600 m long take to cross a pole, if it travels at 45 $\frac{\text{km}}{\text{h}}$?

Q.9 How long will a train 650 m long take to cross a bridge 350 m long, if it travels at a speed of 54 $\frac{\text{km}}{\text{h}}$?

ANSWER EKY

1. $3\frac{3}{5}$ minutes

2. $\frac{8}{3}$ hours

3. 8 days

4. 32 days

5. 50 $\frac{\text{km}}{\text{h}}$

6. 401.5 km

7. $\frac{16}{3}$ hrs

8. 48 sec

9. 1 min 7 sec (approx)