

# JSUNILTUTORIAL

PUNJABI COLONY, GALI 01

CLASS - VI

## Speed, Time and Distance

- Speed is the distance covered by an object in unit time.
- Speed = distance / time
- Distance = speed  $\times$  time
- If distance is fixed, then speed and time are inversely related.  
More the speed, less is the time taken and vice versa.
- To convert m/sec into km/hour, multiply by  $\frac{18}{5}$ ; to convert km/hour into m/sec, multiply by  $\frac{5}{18}$
- Average speed is found by dividing total distance covered by total time taken.

### Exercise

1. A car is travelling at an average speed of 36 km/hour. How much distance will it travel in 45 minutes?
2. A bullock cart is moving at an average speed of 6 km/hour. How much time will it take to cover distance of 20 kilometers?
3. A cat runs at a speed of 100 meters in a minute. Find its speed in km/hour.
4. Convert the following speeds into m/sec
  - (a) 72 km/hour
  - (b) 1.2 km per minute
  - (c) 600 meters per hour.
5. Convert the following speeds into kms/hour
  - (a) 15 m/sec
  - (b) 1.5 m/sec
  - (c) 500 meters per minute.
6. An airplane is flying at a speed of 720 km/hour.
  - (a) If the aerial distance between two cities is 1800 kms, how much time will the airplane take?
  - (b) How much distance does the airplane cover in 40 minutes?
  - (c) How far will it fly in 15 seconds?
7. Liza and Tanya leave the same camp and run in opposite directions. Liza runs at 2 m/s and Tanya at 3 m/s. How far apart are they after 1 hour?
8. Two cars are 635 kilometers apart. They start at the same time and drive toward each other. One travels at 70 km/hr and the other travels at 57 km/hr. In how many hours do they meet?
9. A man can swim at 6 km/hour. The speed of a stream is 2 km/hour. How much time will the man take to swim 400m if
  - (a) he is swimming with the stream?
  - (b) he is swimming against the stream?
10. A tram travels at 10 km/hour for 2 hours and then at 13 km/hour for 1 hour. Find its average speed.

11. A cyclist travels at 8 km/hour for 15 minutes and then at 6 km/hour for 25 minutes. Find his average speed.
12. At a movie set, a horse gallops away with heroine at a speed of 60 km/hour for some time before the hero jumps on its back from a tree and brings the horse to a comfortable trot of 12 km/hour. If in total 26 minutes, the horse covered a distance of 10 kms, calculate for how much distance and time the horse galloped and trotted?
13. A monkey and an ass went for a race. The monkey ran at a speed of 6 km/hour but the ass started running *backwards* at a speed of 1m/sec. Determine the distance between them after 5 minutes.
14. A train covered first 150 kms at a speed of 50 kms an hour and then covered the remaining 150 kms in 2 hours. Find its average speed.

### Answers

1. 27 kms
2. 3 hours 20 minutes
3. 6 km/hour
4. (a) 20 m/sec                      (b) 20 m/sec                      (c) 1/6 m/sec
5. (a) 54 km/hour                      (b) 5.4 km/hour                      (c) 30 km/hour
6. (a) 2½ hours                      (b) 480 km                      (c) 3 km
7. 18 kilometers
8. 5 hours
9. (a) 3 minutes                      (b) 6 minutes
10. 11 km/hour
11. 6.75 km/hour
12. The horse galloped 6 kms in 6 minutes and then trotted 4 kms in 20 minutes.
13. 800 meters
14. 60 km/hour