

Speed

1. What is the difference between instantaneous speed and average speed?
2. If a car moves with an average speed of 60 km/h, how far will it travel in 4 hours?
3. What is the average speed of a car that travels 40 km in one-half hour (0.5 hr)?
4. Would the maximum speed of the car in #3 be larger than, smaller than, or equal to 80 km/h?

Velocity

5. What is the difference between speed and velocity?
6. The speedometer of a car moving east reads 100 km/h and the speedometer of a car moving west also reads 100 km/h. Do they have the same speed? Do they have the same velocity?
7. During a certain period of time, the speedometer of a car reads a constant 60 km/h. Does this indicate a constant speed? Does it indicate a constant velocity?

Acceleration

8. What is acceleration?
9. What is the acceleration of a car that goes from rest to 90 km/h in 10 seconds?
10. What is the acceleration of a car that maintains a constant speed of 50 km/h for 10 seconds?
11. There are three controls in a car that cause it to accelerate. One of them is the accelerator. What are the other two?