

1. A car is driving 32 m/s. How many seconds are required to travel 1500 m? (49 s)
2. A person can run a distance of 825 m in 145 s. What is this person's average speed? (5.7 m/s)
3. What distance is covered by the Earth in 30 minutes (1800 seconds) if it is moving through space with an average speed of 30 000 m/s? (54 000 000 m)
4. A car rolls down a hill with an acceleration of  $4.9 \text{ m/s}^2$ . How much time will pass for its speed to go from 3 m/s to 19.5 m/s? (3.4 s)
5. A truck starts from rest and accelerates to 25 m/s in 7.8 s. What is the average acceleration of the truck? ( $3.2 \text{ m/s}^2$ )

6. Suppose a runner is initially moving at 2.2 m/s. She then accelerates at  $1.2 \text{ m/s}^2$  for 6.1 s. Calculate her final speed? (9.5 m/s)
7. A remote controlled car is measured to accelerate at  $1.9 \text{ m/s}^2$ . The acceleration last for 6.5 s and the car ends up with a final speed of 18 m/s. What was the car's initial speed? (5.7 m/s)
8. To avoid an accident a driver slams on the breaks of a car. The car takes 2.6 seconds to skid to a stop as it was originally going 24 m/s. What was the acceleration of the car? ( $-9.2 \text{ m/s}^2$ )
9. A ball rolled up a hill. The acceleration is measured to be  $-3.8 \text{ m/s}^2$ . It takes the ball 3.4 s to slow to a speed of 2.0 m/s. What was the ball's initial speed up the hill? (15 m/s)
10. A car initially going 30 m/s breaks for 5.7 s. The acceleration is  $-4.1 \text{ m/s}^2$ . What is the final speed of the car after that amount of time? (6.7 m/s)