

Acceleration Worksheet

Acceleration is how fast an objects's velocity changes.

$$\text{Average acceleration} = \frac{\text{change in velocity}}{\text{time}} \quad a = \frac{V \text{ final} - V \text{ start}}{t}$$

CALCULATE THE ACCELERATION FOR THE FOLLOWING QUESTIONS. BE SURE TO WRITE THE EQUATION EACH TIME AND PLUG IN THE NUMBERS AND UNITS IN THE CORRECT PLACES. ALSO SHOW THE ANSWER WITH CORRECT UNITS.

1. A car increases it's velocity from 0 m/s to 14 m/s in 2 seconds.
2. A bicycle rider increases his speed from 5 m/s to 15 m/s in 10 seconds.
3. A racing car's velocity is increased from 44 m/s to 66m/s in 11 seconds.
4. A train moving at a velocity of 15 m/s is accelerated to 24 m/s over a 12 second period.
5. A plane starting from rest is accelerated to its takeoff velocity of 75 m/s during a 5 second period.
6. A ball rolling down a hill for 9 seconds accelerates from 3 m/s to 34.5 m/s.