

Velocity & Acceleration Practice

Discussion Questions:

1. What is motion?
2. Is speed a scalar or vector quantity? Why?
3. In your own words, describe velocity.
4. How is acceleration related to velocity?
5. What are the 3 types of acceleration? Give an example of each
 - a.
 - b.
 - c.
6. Does acceleration ALWAYS make an object move faster?
7. What unit do we use for acceleration?
8. What is the acceleration of an object whose final velocity is 100m/s and whose initial velocity is 50m/s if the motion took 10 seconds to complete?
9. What type of acceleration is this?

For each of the following, determine whether the example is showing, Speed (S), Velocity (V) or

Acceleration (A)

- 1) _____ A bus moving 55mi/hr
 - 2) _____ A car moving 65mi/hr North
 - 3) _____ NASCAR racers moving around a track at 90mi/hr
 - 4) _____ A car slows down for a stop sign
 - 5) _____ A bird flies 25m/s to the East
 - 6) _____ A ball falling due to gravity
 - 7) _____ A snail moving 15cm/min
 - 8) _____ A bike moving 45m/s South
 - 9) _____ A car speeding up
 - 10) _____ A car turning around at 10mi/hr
 - 11) _____ Students running around a track at 2mi/hr
 - 12) _____ A book sliding across a table till it stops
 - 13) _____ A car rolling down a hill at 5mi/hr
 - 14) _____ A car stopping for a red light
 - 15) _____ You turn around in circles at the same speed
- 16) What is the acceleration of an object whose final velocity is 5m/s and whose initial velocity is 15m/s if the motion took 2s to complete? What type of acceleration is this?
- 17) What is the acceleration of an object whose final velocity is 15m/s and whose initial velocity is 15m/s if the motion took 1000s to complete? What type of acceleration is this?