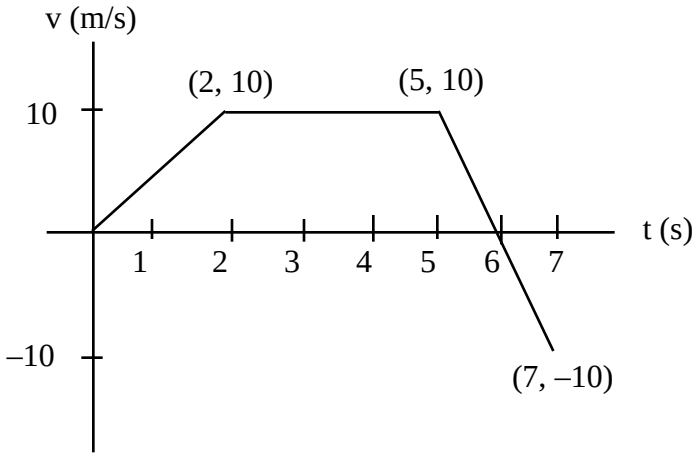
Acceleration and Velocity-Time Graphs Quiz 1.0

1. (T/F) Acceleration is the rate at which velocity changes.

2. (T/F) In English, “deceleration” means speed decreases.

3. If $a = -5\ m/s^2$ and $v(0) = 12$ m/s, then (a) $v(1) = ?$ and (b) $v(2) = ?$ (That is, what is instantaneous velocity one and two seconds later?)

Use the velocity-time graph shown here to answer the rest of the questions. Remember that a particle is moving along an x-axis.



4. What is the particle’s initial velocity?

5. $v(1) = ?$

6. Find average acceleration for $0 < t < 2s$.

7. Find a_{AVG} from $t = 5s$ to $t = 7s$.

8. When is acceleration negative?

9. Find v_{AVG} for the first two seconds.

10. What is the distance traveled in the first two seconds?

11. Find average velocity for $2 < t < 5s$.

12. Find the distance traveled for $2 < t < 5s$.

13. When is velocity zero?

14. When is acceleration zero?

15. When is the particle moving to the left?