1. A car getting on the highway with an initial velocity of 10 m/s speeds up smoothly to 28 m/s in 6 seconds. What constant acceleration does the car experience?
2. 30 m/s
3. 0.3 m/s
4. 3 m/s
5. Not enough information
6. The same car getting on the highway with an initial velocity of 10 m/s speeds up smoothly to 28 m/s in 6 seconds. What is the car’s average velocity?
   1. 0 m/s
   2. 18 m/s
   3. 19 m/s
   4. 38 m/s
7. Again, the same car getting on the highway with an initial velocity of 10 m/s speeds up smoothly to 28 m/s in 6 seconds. What is the displacement of the body over the 6 seconds of acceleration?
   1. 6 m
   2. 60 m
   3. 114 m
   4. 3 m
8. Another car getting on the highway starts with a velocity of 12 m/s and accelerates at 2.5 m/s^2 for 15s. What is the car’s final velocity?
   1. 37.5 m/s
   2. 12 m/s
   3. 50 m/s
   4. 60 m/s
9. When velocity and acceleration have the same sign or are in the same direction what is the state of motion?
   1. Slow down
   2. Constant
   3. Speeds up
10. When velocity and acceleration have opposite signs or are in opposite directions, what is the state of motion?
    1. Speeds up
    2. Constant
    3. Slows down
11. A person standing at the edge of a cliff drops a brick from rest that impacts the ground 2.4 seconds later? How far did the brick fall?
    1. 24.2m
    2. 240.2 m
    3. 28.2 m
    4. 30 m
12. In the previous question, what was the velocity of the brick upon impact with the ground?
    1. 10 m/s downward
    2. 0 m/s downward
    3. 23.5 m/s downward
13. A person standing at the edge of a cliff 30 m high reaches out over the edge and throws a ball vertically upward with a velocity of 12 m/s. When does the ball reach its highest point?
    1. 12 s
    2. .12 s
    3. 1.22 s
    4. 122 s
14. In the previous question, how high off the ground is that?
    1. 7.3 m
    2. 73.3m
    3. 37.3
15. A projectile has an initial velocity of V = 40 m/s at 60 degrees. Calculate the initial velocity’s horizontal and vertical components.
    1. Vertical = 34.6 m/s and Horizontal = 20 m/s
    2. Not enough information
    3. Vertical = 20 m/s and Horizontal = 34.6 m/s
16. An object is shot vertically upward into the air with a positive initial velocity. Which of the following V vs T graphs represents this motion?