Acceleration Quiz

Part 1 – Multiple Choice

How fast is fast?

Practice A and B are data tables of a remote control cars speed over 4 seconds of time. Use this data to answer the following questions.

1. _____ In Practice B, how fast was the car going after 3 seconds?

    A. 6 meters/ seconds
    B. 4 meters/ seconds
    C. 2 meters/ seconds
    D. 0 meters/ seconds

2. _____ In Practice A, how long did it take the car to reach 6 m/s?

    A. 2 seconds
    B. 3 seconds
    C. 4 seconds
    D. 6 seconds

3. _____ In Practice B, what was the car doing over those 4 seconds?

    A. speeding up
    B. slowing down
    C. keeping a constant speed
    D. free falling

4. _____ How would you calculate the acceleration of this car in Practice B?

    A. (4s) / 0 m/s
    B. (0 – 8 m/s) / 4 s
    C. (4s) / 8 m/s
    D. (8 m/s – 0) / 4 s

5. _____ What is the acceleration of the car in Practice A?

    A. 32 m/s/s
    B. 8 m/s/s
    C. 4 m/s/s
    D. 2 m/s/s

Practice A

Time (s)	Velocity (m/s)
0	0
1	2
2	4
3	6
4	8

Practice B

Time (s)	Velocity (m/s)
0	8
1	6
2	4
3	2
4	0

Graph of Speed vs. Time

Figure 1.a

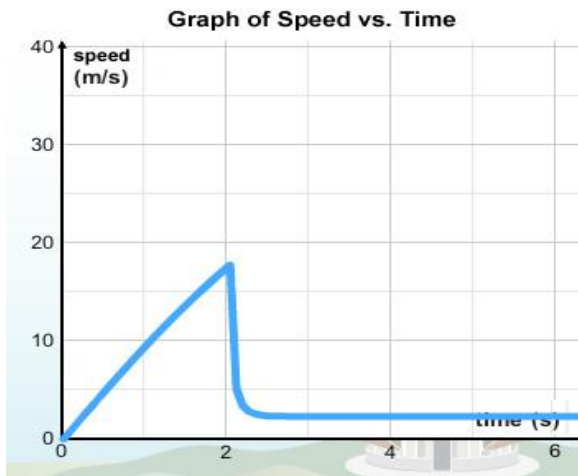## Graph of Speed vs. Time

Figure 1.b

Distance vs. time
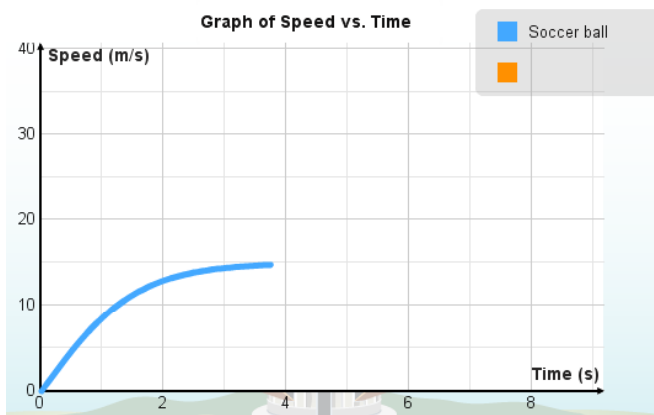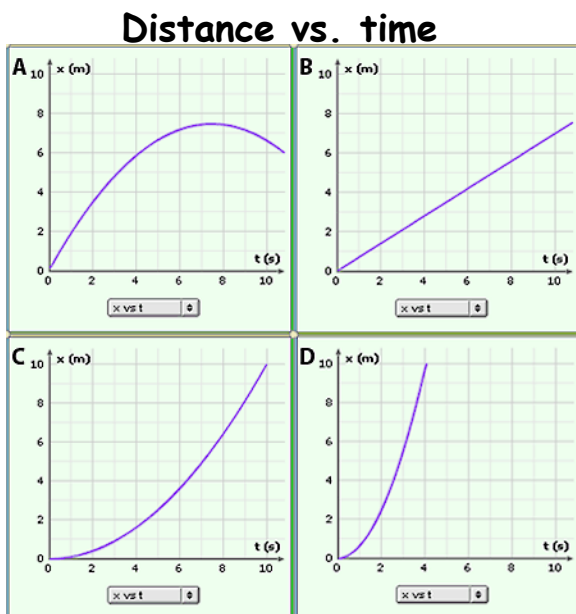

Figure 1.c

6. _____ According to Figure 1.b, what is happening to the soccer ball?

    A. the ball is moving with a constant speed
    B. the ball is slowing down
    C. the ball is speeding up
    D. the ball is speeding up then stopped

7. _____ Figure 1.a shows the graph of a falling object. What probably happened?

    A. At 2 seconds the object fell off of a cliff
    B. At 2 seconds a parachute opened on the object.
    C. At 2 seconds the object hit the ground and stopped moving.
    D. At 2 seconds the object stopped going up and started going down.

8. _____ Which of the graphs, in Figure 1.c, shows an object with a high acceleration?

    A. Graph A
    B. Graph B
    C. Graph C
    D. Graph D

9. _____ Using the speed-time graph (Figure 1.a), how fast was the ball moving after 1 second?

    A. 1 m/s
    B. 5 m/s
    C. 10 m/s
    D. 20 m/s

10. _____ Using Figure 1.c, which graph shows an object with no acceleration at all?

    A. Graph A
    B. Graph B
    C. Graph C
    D. Graph D