





- A- 2.1 m/s, to the right
- B- 3.1 m/s, to the right
- C- 4.1 m/s, to the right
- D- 5.1 m/s, to the right

12. The graph above shows displacement versus time. What is the average velocity for line A?
- A- 2.0 m/s
  - B- 3.0 m/s
  - C- 4.0 m/s
  - D- 5.0 m/s
13. A sports car traveling at 24.7 m/s slows at a constant rate to a stop in 16.00 s. What is the displacement of the sports car in this time interval?
- A- 1978 m
  - B- 188 m
  - C- 198 m
  - D- 208 m
14. A toy car is given an initial velocity of 7.0 m/s and experiences a constant acceleration of  $1.0 \text{ m/s}^2$ . What is the final velocity after 6.0 s?
- A- 10.0 m/s
  - B- 11.0 m/s
  - C- 12.0 m/s
  - D- 13.0 m/s
15. A soccer ball is moving horizontally at a speed of 4.0 m/s. It then undergoes a constant acceleration. After 8.00 s, the ball is moving at 4.8 m/s. What is the ball's displacement?
- A- 28.2 m
  - B- 30.2 m
  - C- 32.2 m
  - D- 35.2 m
16. A race car accelerates from 0.0 m/s to 51.0 m/s with a displacement of 75.0 m. What is the car's acceleration?
- A-  $14.3 \text{ m/s}^2$
  - B-  $15.3 \text{ m/s}^2$
  - C-  $16.3 \text{ m/s}^2$
  - D-  $17.3 \text{ m/s}^2$

17. Two cars pass each other traveling at the same speed. One car has a constant velocity of 19.0 m/s, east. The other car has a constant acceleration of  $3.00 \text{ m/s}^2$ , west. How much time will have elapsed until the cars are 132 m apart?
- A- 1.1 s  
B- 2.1 s  
C- 3.1 s  
D- 4.1 s
18. A rock is thrown straight upward with an initial velocity of 25.4 m/s where the acceleration due to gravity has a magnitude of  $9.81 \text{ m/s}^2$ . What is the rock's displacement after 2.65 s?
- A- 22.9 m  
B- 32.9 m  
C- 42.9 m  
D- 52.9 m
19. A rock is thrown straight upward with an initial velocity of 6.4 m/s in a location where the acceleration due to gravity has a magnitude of  $9.81 \text{ m/s}^2$ . To what height does it rise?
- A- 2.1 m  
B- 3.1 m  
C- 4.1 m  
D- 5.1 m
20. A pebble falls from the bottom of the basket of a hot-air balloon that is rising at 1.4 m/s. After 3.8 seconds, how far below the basket is the pebble? (Assume no air resistance and  $a = -g = -9.81 \text{ m/s}^2$ .)
- A- 51 m  
B- 61 m  
C- 71m  
D- 81 m

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