Multiple Choice

3.1 Acceleration   17.

Which variable represents displacement?

a. a
b. d
c. t
d. v

18.

If a velocity increases from 0 to 20 m/s in 10 s, what is the average acceleration?

a. 0.5 m/s^2
b. 2 m/s^2
c. 10 m/s^2
d. 30 m/s^2

3.2 Representing Acceleration with Equations and Graphs   19.

For the motion of a falling object, which graphs are straight lines?

a. Acceleration versus time only
b. Displacement versus time only
c. Displacement versus time and acceleration versus time
d. Velocity versus time and acceleration versus time

20.

A bullet in a gun is accelerated from the firing chamber to the end of the barrel at an average rate of 6.30×10^5 m/s^2 for 8.10×10^{-4} s. What is the bullet's final velocity when it leaves the barrel, commonly known as the muzzle velocity?

a. 7.79 m/s
b. 51.0 m/s
c. 510 m/s
d. 1020 m/s