

26. The bullet starts at rest ( $v_0 = 0$ ) and after traveling the length of the barrel ( $\Delta x = 1.2$  m) emerges with the given velocity ( $v = 640$  m/s), where the direction of motion is the positive direction. Turning to the constant acceleration equations in Table 2-1, we use

$$\Delta x = \frac{1}{2} (v_0 + v) t \quad .$$

Thus, we find  $t = 0.00375$  s (about 3.8 ms).