

34

Running with an initial velocity of 11 m/s , a horse has an average acceleration of -1.81 m/s^2 . How long does it take for a horse to decrease its velocity to 6.5 m/s ?

Equation:

$$V = V_0 + a \Delta t$$

$$V_0 = 11 \text{ m/s}$$

$$a = -1.81 \text{ m/s}^2$$

$$V = 6.5 \text{ m/s}$$

$$\Delta t = ?$$

$$\Delta t = \frac{V - V_0}{a} = \frac{6.5 \text{ m/s} - 11 \text{ m/s}}{-1.81 \text{ m/s}^2}$$

$$= \boxed{2.55}$$