

Sci 10 acceleration sheet # 8

$v_i = 0$ $a = ?$ $v_f = ?$

$d = 120 \text{ m}$
 $t = 8.0 \text{ s}$

$v_{ave} = \frac{d}{t}$

$v_{ave} = \frac{120 \text{ m}}{8.0 \text{ s}}$

$v_{ave} = 15 \frac{\text{m}}{\text{s}}$

$v_{ave} = \frac{v_i + v_f}{2}$

$15 \frac{\text{m}}{\text{s}} = \frac{0 + v_f}{2}$

$30 \frac{\text{m}}{\text{s}} = v_f$

$a = \frac{v_f - v_i}{t} = \frac{(30 \frac{\text{m}}{\text{s}}) - (0)}{8.0 \text{ s}}$

$a = 3.8 \frac{\text{m}}{\text{s}^2}$

Mar 14-9:56 AM