P #0

Ch 2 Worksheet

a) $v_i = 25.0$ m/s
$a = -9.8$ m/s^2
$t = 3.0$ sec

$v_f = v_i + a \cdot t$

$= (25.0 \text{ m/s}) + (-9.8 \text{ m/s}^2)(3.0 \text{ sec})$

$\boxed{v_f = -4.4 \text{ m/s (falling)}}$

b) $v_i = 25.0$ m/s
$a = -9.8$ m/s^2
$v_f = 0$ m/s (stopped at top)

$v_f = v_i + a \cdot t$

$0 \text{ m/s} = 25 \text{ m/s} + (-9.8 \text{ m/s}^2) \cdot t$

$\boxed{t = 2.55 \text{ sec}}$