PROJECTILE MOTION Scavenger Hunt!

Equation: $h = -16t^2 + 18t + 5$

$t = \frac{-18}{2(-16)} = 0.5625$ $\quad h = -16(.5625)^2 + 18(.5625) + 5$

$= 10.06$

10.06 ft

Equation: $h = -16t^2 + 20$

$t = \frac{0 \pm \sqrt{0^2 - 4(-16)(20)}}{2(-16)}$ $\quad t = \frac{0 \pm \sqrt{1280}}{-32}$

$t = \{-1.1, 1.125\}$

1.12 sec.

Equation: $h = -16t^2 + 48t + 4$

$(t = 2)$ $\quad h = -16(2)^2 + 48(2) + 4$

$= 36$

36 ft.

Equation: $h = -16t^2 + 72t + 100$

$t = \frac{-72 \pm \sqrt{72^2 - 4(-16)(100)}}{2(-16)}$

$t = \frac{-72 \pm \sqrt{11584}}{-32}$ $\quad t = \{-1.1, 5.613\}$

5.61 sec.

Equation: $h = -16t^2 + 112t + 5$

$t = \frac{-112}{2(-16)} = 3.5$ $\quad h = -16(3.5)^2 + 112(3.5) + 5$

$= 201$

201 ft

Equation:

Equation:

Equation:

Equation:

Equation: