

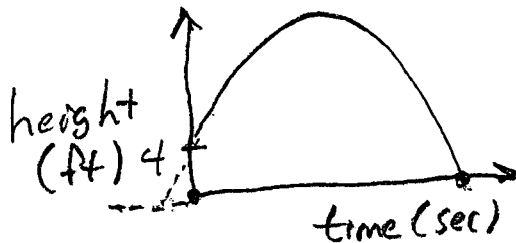
Classwork Alg 2 Weps 9-5-12

(1) $h(t) = -16t^2 + 63t + 4$

h = height of Arrow (t)

t = time (sec)

How long is Arrow in Air?



$$-16t^2 + 63t + 4 = 0$$

$$\text{Sum} \Rightarrow 63$$

$$\text{prod} \Rightarrow -64$$

$$-1 + 64$$

$$(-16t^2 + 64t) + (-1t + 4) = 0$$

$$16t(-t + 4) + 1(-1t + 4) = 0$$

$$(-t + 4)(16t + 1) = 0$$

$$t = \{4, -\frac{1}{16}\}$$

$$t = 4 \text{ sec}$$

$$\textcircled{7} \quad h(x) = x^2 + 4x$$

$$0 = x(x+4) \quad \therefore \boxed{\{0, -4\}}$$

WS

$$\textcircled{3} \quad x^2 = -18 - 9x$$

$$x^2 + 9x + 18 = 0$$

$$\text{sum} = b = 9$$

$$\text{prod} = ac = 18$$

$$+3 + 6$$

$$(x+3)(x+6) = 0 \quad \therefore \boxed{x = \{-3, -6\}}$$

$$\underline{\underline{\text{CK}}} \quad (-3)^2 \stackrel{?}{=} -18 - 9(-3)$$

$$9 \stackrel{?}{=} -18 + 27 \quad \checkmark$$

$$\underline{\underline{\text{CK}}} \quad (-6)^2 \stackrel{?}{=} -18 - 9(-6)$$

$$36 \stackrel{?}{=} -18 + 54 \quad \checkmark$$

$$\textcircled{11} \quad 15k^2 = -5 - 28k$$

$$15k^2 + 28k + 5 = 0$$

$$\text{Sum} = 28$$

$$\text{prod} = 75$$

$$+ 3 + 25$$

$$(15k^2 + 3k) + (25k + 5) = 0$$

$$3k(5k+1) + 5(5k+1) = 0$$

$$(5k+1)(3k+5) = 0$$

$$k = \left\{ -\frac{1}{5}, -\frac{5}{3} \right\}$$

$$15\left(-\frac{1}{5}\right)^2 \stackrel{?}{=} -5 - 28\left(-\frac{1}{5}\right)$$

$$15\left(\frac{1}{25}\right) \stackrel{?}{=} -5 + \frac{28}{5}$$

$$\frac{3}{5} \stackrel{?}{=} \frac{-25}{5} + \frac{28}{5} \checkmark$$

$$15\left(-\frac{5}{3}\right)^2 \stackrel{?}{=} -5 - 28\left(-\frac{5}{3}\right)$$

$$5 + 15\left(\frac{25}{9}\right) \stackrel{?}{=} -\frac{15}{3} + \frac{140}{3}$$

$$\frac{125}{3} \stackrel{?}{=} \frac{125}{3} \checkmark$$