(2) $2x^2 + 3x + 1 = 0$

$(2x^2 + 2x)(+x + 1) = 0$

$2x(x+1) + 1(x+1) = 0$

$(x+1)(2x+1) = 0$

$x = -1 ; -\frac{1}{2}$

(6)

$$9x^2 - 12x + 4 = 0$$

$$(9x^2 - 6x)(-6x + 4) = 0$$

$$3x(3x - 2) - 2(3x - 2)$$

$$(3x - 2)(3x - 2) = 0$$

$$x = \frac{2}{3}, \frac{2}{3}$$

1.

$$4\sqrt{-63}$$

$$4\sqrt{9 \cdot 7}$$

$$12i\sqrt{7}$$

2. $\sqrt{-\frac{4}{3}} = \frac{2i}{\sqrt{3}} \cdot \frac{\sqrt{3}}{\sqrt{3}}$

$$= \frac{2i\sqrt{3}}{3}$$

2.

$(3 + 10i) - (4 - 8i)$

$3 - 4 + 10i - -8i$

$-1 + 18i$

$$|a \pm bi| = \sqrt{a^2 + b^2}$$

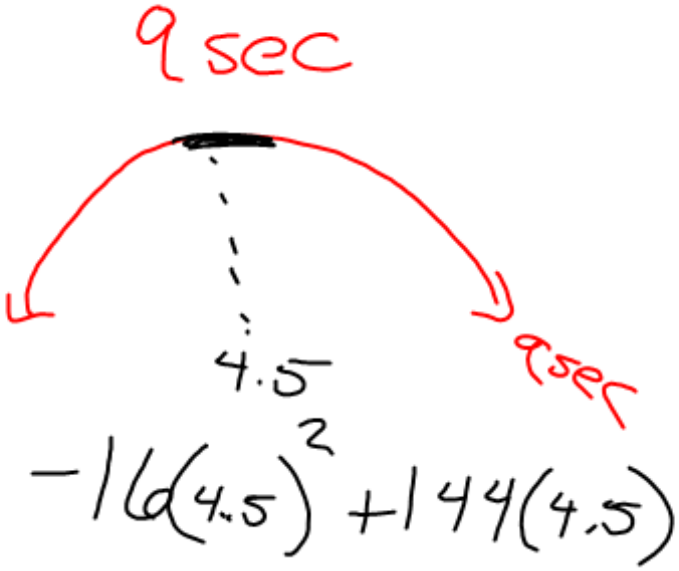
$$\sqrt{(-4)^2 + (2)^2}$$

$$\sqrt{16 + 4}$$

$$\sqrt{20}$$

$$2\sqrt{5}$$

a) $0 =$



$$-16(4.5)^2 + 144(4.5)$$

5.7

$$x^2 + 4x + 7 = 0$$

C. $x^2 + 4x + \_\_ = -7 + \_\_$

A $x^2 + 4x + \underline{4} = -7 + \underline{4}$

B $\left(\frac{4}{2}\right)^2 = 2^2$

$$\sqrt{(x+2)^2} = \sqrt{-3}$$

$$x + 2 = \pm i\sqrt{3}$$

$$x = -2 \pm i\sqrt{3}$$

(2) $3x^2 + 18x - 1 = 3$

C $3x^2 + 18x + \_\_\_ = 4 + \_\_\_$

A $3(x^2 + 6x + 9) = 4 + 27$

B $\left(\frac{6}{2}\right)^2 = (3)^2$

$\frac{3(x+3)^2}{3} = \frac{31}{3}$

$\sqrt{(x+3)^2} = \sqrt{\frac{31}{3}}$

$x + 3 = \pm\frac{\sqrt{31}}{\sqrt{3}}$

$x = -3 \pm \frac{\sqrt{93}}{3}$

vertex form

$$y = x^2 + 4x + 1$$

$$y - 1 + 4 = x^2 + 4x + \underline{\quad 4 \quad}$$

$$\left(\frac{4}{2}\right)^2 = 2^2$$

$$y + 3 = (x+2)^2$$

$$\boxed{y = (x+2)^2 - 3}$$

Vertex: $(-2, -3)$

$$4x^2 + 12x + 3 = 0$$

$$4x^2 + 12x + \_\_\_ = -3$$

$$4\left(x^2 + 3x + \frac{9}{4}\right) = -3 + 9$$

$$\left(\frac{3}{2}\right)^2$$

$$4 \cdot \frac{1}{4}\left(\frac{9}{4}\right) = \frac{36}{4} = 9$$

$$\frac{4\left(x + \frac{3}{2}\right)^2}{4} = \frac{6}{4}$$

$$\sqrt{\left(x + \frac{3}{2}\right)^2} = \sqrt{\frac{6}{4}}$$

$$x + \frac{3}{2} = \pm\frac{\sqrt{6}}{2}$$

$$x = -\frac{3}{2} \pm \frac{\sqrt{6}}{2}$$

$$3x^2 + 9x - 2 = 0$$

$$3\left(x^2 + 3x + \frac{9}{4}\right) = \frac{2}{1} + \frac{27}{4}$$

$\left(\frac{3}{2}\right)^2$

$\frac{3}{1}\left(\frac{9}{4}\right)$

$$3\left(x + \frac{3}{2}\right)^2 = \frac{35}{4} \quad \cdot \frac{1}{3}$$

$$\sqrt{\left(x + \frac{3}{2}\right)^2} = \sqrt{\frac{35}{12}}$$

$$x + \frac{3}{2} = \pm \frac{\sqrt{35}}{2\sqrt{3}}$$

$$x = \frac{-3}{2} \pm \frac{\sqrt{105}}{6}$$

$$h = -0.01x^2 + 1.18x + 2$$

$$-39.81 + h - 2 = -.01\left(x^2 - 118x + \underline{3481}\right)$$

$$\left(\frac{-118}{2}\right)^2 = (-59)^2$$

$$h - 36.81 = -.01(x - 59)^2$$

$$h = -.01(x - 59)^2 + 36.81$$