(7) $\overset{x}{(2}, \overset{y}{9})$ $(-1, 6)$ $(1, 4)$

$y = ax^2 + bx + c$

$9 = 4a + 2b + c$

$6 = a - b + c$

$4 = a + b + c$

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

(6) $y = -3x^2 + 12x + 5$

$x = \frac{-b}{2a} = \frac{-12}{2(-3)} = 2$

$y = -3(2)^2 + 12(2) + 5$

$-12 \quad +24 \quad +5$

$y = 17$

$y = a(x-h)^2 + k$

$y = -3(x-2)^2 + 17$

(5)

$$y = -(x-3)^2 + 5$$

(x-3)

$$y = -(x^2 - 6x + 9) + 5$$

$$y = -x^2 + 6x - 9 + 5$$

$$y = -x^2 + 6x - 4$$

(4) $y = \frac{1}{2}(x+4)^2 - 6$

h k

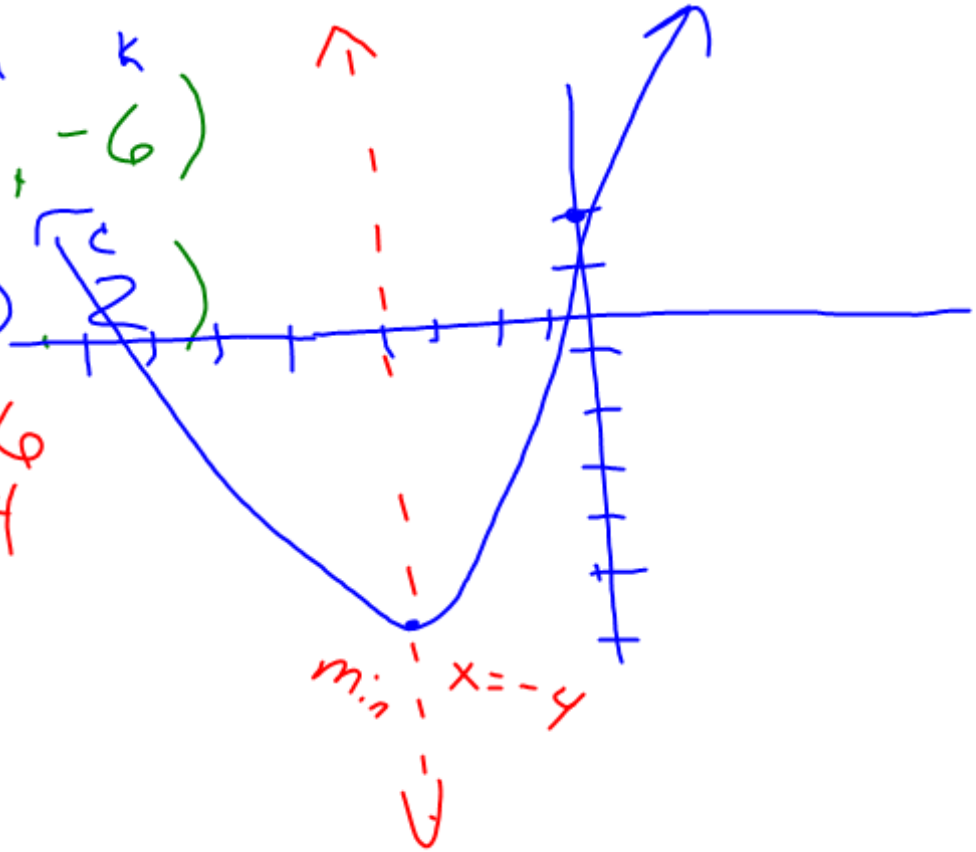
V: $(-4, -6)$

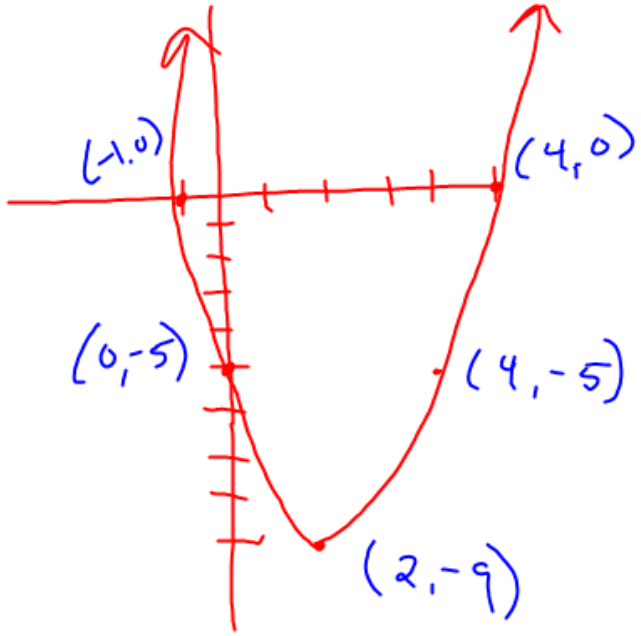
y: $(0, 2)$

c

VS: down 6

HS: left 4





$y = a(x-h)^2 + k$

$0 = a(-1-2)^2 - 9$

$9 = 9a$

$1 = a$

$y = 1(x-2)^2 - 9$

$x^2 - 4x + 4 - 9$

$y = x^2 - 4x - 5$

Solve

$2x^2 + 32 = 0$

$2x^2 = -32$

$x^2 = -16$

$\boxed{x = \pm 4i}$

$6x^2 + 4x = 2$

$6x^2 + 4x - 2 = 0$

$6x^2 + 6x - 2x - 2 = 0$

$6x(x+1) - 2(x+1) = 0$

$(6x-2)(x+1) = 0$

$x = -1, \frac{1}{3}$

C. 5.

$2x^2 + 4x + 1 = 0$

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

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

$(x+1)^2 = \frac{1}{2}$

$x + 1 = \pm\sqrt{\frac{1}{2}}$

$x = -1 \pm \frac{\sqrt{2}}{2}$

$x^2 - 3x - 8 = 0$

$x^2 - 3x + \frac{9}{4} = 8 + \frac{9}{4}$

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

$\left(x - \frac{3}{2}\right)^2 = \frac{41}{4}$

$x - \frac{3}{2} = \pm\frac{\sqrt{41}}{2}$

$x = \frac{3}{2} \pm \frac{\sqrt{41}}{2}$

$x^2 - 6x + 1 = 0$

$\sqrt{b^2 - 4ac}$

$\sqrt{36 - 4(1)(1)}$

$\sqrt{+}$

2 Real

$\frac{3 \pm \sqrt{6}}{3}$

1