more 5.7

① $3 - 5x^2 = 9$

$\frac{-5x^2}{-5} = \frac{6}{-5}$

$\sqrt{x^2} = \sqrt{\frac{-6}{5}}$

$x = \pm \frac{i\sqrt{6}}{\sqrt{5}}$

$x = \pm \frac{i\sqrt{30}}{5}$

② $\frac{3(x-2)^2}{3} = \frac{21}{3}$

$\sqrt{(x-2)^2} = \sqrt{7}$

$x - 2 = \pm\sqrt{7}$

$\boxed{x = 2 \pm \sqrt{7}}$

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

C: $x^2 - 6x + \underline{\quad 9 \quad} = -4 + \underline{\quad 9 \quad}$

A: $\left(\frac{b}{2}\right)^2 = \left(\frac{-6}{2}\right)^2 = (-3)^2$

B: $\sqrt{(x-3)^2} = \sqrt{5}$

$x - 3 = \pm\sqrt{5}$

$\boxed{x = 3 \pm \sqrt{5}}$

(2) $3x^2 + 12x + 9 = 0$

C: $3x^2 + 12x + \_\_ = -9 + \_\_$

A: $3(x^2 + 4x + \frac{4}{}) = -9 + 12$

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

B:

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

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

$$x + 2 = \pm 1$$

$$x = -2 \pm 1$$

$$\boxed{\begin{array}{l} x = -1 \\ x = -3 \end{array}}$$

④ $y = \overset{a}{2}x^2 + \overset{b}{2}x - \overset{c}{5}$

$\frac{1}{2} + y + 5 = 2\left(x^2 + x + \frac{1}{4}\right)$

$\left(\frac{1}{2}\right)^2$

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

$y + 5\frac{1}{2} = 2\left(x + \frac{1}{2}\right)^2$

$2\left(\frac{1}{4}\right)$

$y = 2\left(x + \frac{1}{2}\right)^2 - 5\frac{1}{2}$

$V: \left(-\frac{1}{2}, -5\frac{1}{2}\right)$

$$y = 5x^2 + 10x + 10$$

$$\underline{5} + y - 10 = 5(x^2 + 2x + \underline{1})$$

$$\left(\frac{2}{2}\right)^2 = 1^2$$

$$y = 5(x+1)^2 + 5$$

$$V: (-1, 5)$$

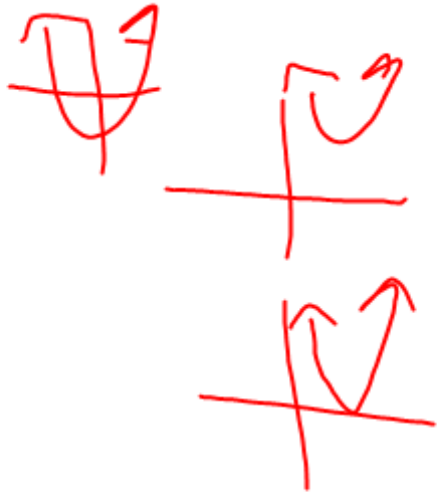
5-8

$$X = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

Discriminant: $\sqrt{0}$: 1 Real

$\sqrt{-}$: no Real
2 imag

$\sqrt{+}$: 2 Real



I.

$9x^2 + 6x + 1 = 0$

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

$\sqrt{(6)^2 - 4(9)(1)}$

$\sqrt{36 - 36}$

$\sqrt{0}$

# of Solution: 1 Real

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

$\sqrt{36 - 4(9)(-4)}$

$\sqrt{36 +}$

$\sqrt{+}$: 2 Real

$9x^2 + 6x + 5 = 0$

$\sqrt{36 - 4(9)(5)}$

$\sqrt{-}$: no Real
2 imag

$$3x^2 + 8x = 12$$

① $3x^2 + 8x - 12 = 0$

$ax^2 + bx + c = 0$

$$x = \frac{-8 \pm \sqrt{(8)^2 - 4(3)(-12)}}{2(3)}$$

$$x = \frac{-8 \pm \sqrt{64 + 144}}{6}$$

$$x = \frac{-8 \pm \sqrt{208}}{6}$$

$\sqrt{16 \cdot 13}$

$$x = \frac{-8 \pm 4\sqrt{13}}{6}$$

$$\boxed{x = \frac{-4 \pm 2\sqrt{13}}{3}}$$