

Test Tomorrow

1) FOIL

2) Factor equations from

$$y = ax^2 + bx + c \text{ to } y = a(x-p)(x-q)$$

3) Solve an equation in the form of

$$y = a(x-p)(x-q)$$

$$(x+1)^2 - 3(x-1)^2 = 6$$

$$(x+1)(x+1) - 3(x-1)(x-1) = 6$$

$$(x^2 + 1x + 1x + 1) - 3(x^2 - 1x - 1x + 1) = 6$$

$$x^2 + 2x + 1 - 3x^2 + 6x - 3 = 6$$

$$-2x^2 + 8x - 2 = 6$$

$$\begin{array}{r} -2x^2 + 8x - 2 = 6 \\ \quad -6 \quad -6 \\ \hline \end{array}$$

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

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

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

$$x-2=0$$

$$x=2$$

$$x-2=0$$

$$x=2$$

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

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

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

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

$$3(x-1)(x+1) = 0$$

$$x-1 = 0$$

$$x = 1$$

$$x+1 = 0$$

$$x = -1$$

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

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

$$\sqrt{x^2} = \sqrt{1}$$

$$x = +1$$

$$x = -1$$

$$2x^2 + 17x + 21 = 0$$

$$14x + 3x = 17x$$

$$14x \cdot 3x = 42x^2$$

$$2x^2 + 14x \left\{ \begin{array}{l} + 3x + 21 = 0 \\ + 3(x+7) = 0 \end{array} \right.$$

$$2x(x+7) + 3(x+7) = 0$$

$$(2x+3)(x+7) = 0$$

$$2x+3=0$$

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

$$\frac{x+7=0}{-1 \quad -1}$$

$$x = -7$$

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

$$5x^2 + 14x - 3 = 0$$

$$15x + -1x = 14x$$

$$15x \cdot -1x = -15x^2$$

$$5x^2 + 15x \quad \left. \begin{array}{l} -1x - 3 \\ -1(x+3) \end{array} \right\}$$
$$5x(x+3) \quad \left. \begin{array}{l} -1(x+3) \end{array} \right\}$$

$$(5x - 1)(x + 3) = 0$$

$$\begin{array}{r} 5x - 1 = 0 \\ +1 \quad +1 \end{array}$$

$$\frac{5x}{5} = \frac{1}{5}$$

$$x = \frac{1}{5}$$

$$x + 3 = 0$$

$$x = -3$$