

MODEL - How Your Work Should Look

EX $2x^2 + 4x + 14 = 2$

$$\frac{2x^2}{2} + \frac{4x}{2} = \frac{-12}{2}$$

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

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

$$x+1 = \pm\sqrt{-5} = \pm i\sqrt{5}$$

$$\boxed{x = -1 \pm i\sqrt{5}} \quad \text{OR} \quad \boxed{x = \{-1 + i\sqrt{5}, -1 - i\sqrt{5}\}}$$

$\pm$ NOTATION

SET NOTATION

NOTES:

YOU WILL NOT HAVE THESE IN MOST CASES

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

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

$$= 1$$

DON'T FORGET $\pm$

CK $2(\quad)^2 + 4(\quad) + 14 \stackrel{?}{=} 2$

$$2(-1 + i\sqrt{5})^2 + 4(-1 + i\sqrt{5}) + 14 \stackrel{?}{=} 2$$

$$2(-1 + i\sqrt{5})(-1 + i\sqrt{5}) - 4 + 4i\sqrt{5} + 14 \stackrel{?}{=} 2$$

$$2[1 - i\sqrt{5} - i\sqrt{5} + (i^2)5] - 4 + 4i\sqrt{5} + 14 \stackrel{?}{=} 2$$

$$2[1 - 2i\sqrt{5} - 5] - 4 + 4i\sqrt{5} + 14 \stackrel{?}{=} 2$$

$$2 - 4i\sqrt{5} - 10 - 4 + 4i\sqrt{5} + 14 \stackrel{?}{=} 2$$

$$2 - 14 + 14 \stackrel{?}{=} 2 \checkmark$$

USE ONE NOTATION OR THE OTHER

YOU WILL PUT THESE ON SAME LINE
FOIL