

#17)  $\frac{8x^2}{8} + \frac{16x}{8} = \frac{42}{8}$

$$x^2 + 2x = \frac{21}{4}$$

⊖  $2 \cdot \frac{1}{2} = 1$   
 ⊕  $(1)^2 = 1$  add to both sides

$$x^2 + 2x + 1 = \frac{21}{4} + 1$$

$$(x+1)^2 = \frac{21+4}{4} = \frac{25}{4}$$

Use Square Root Prop.

$$x+1 = \pm \sqrt{\frac{25}{4}}$$

$$x+1 = \pm \frac{\sqrt{25}}{\sqrt{4}} = \pm \frac{5}{2}$$

$$x+1 = \pm \frac{5}{2}$$

$$x = -1 \pm \frac{5}{2}$$

①  $x = \frac{-2+5}{2} = \frac{3}{2}$   
 ②  $x = \frac{-2-5}{2} = \frac{-7}{2}$

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

$$x = \frac{3 \pm 3\sqrt{3}}{4}$$

$$2\left(\frac{3-3\sqrt{3}}{4}\right)^2 - 3\left(\frac{3-3\sqrt{3}}{4}\right) + 9 = 0$$

$$2\left(\frac{3-3\sqrt{3}}{4}\right)\left(\frac{3-3\sqrt{3}}{4}\right) - \frac{-9+9\sqrt{3}}{4} + 9 = 0$$

F:  $3 \cdot 3 = 9$   
 O:  $3(-3\sqrt{3}) = -9\sqrt{3}$   
 I:  $(-3\sqrt{3})(3) = -9\sqrt{3}$   
 L:  $(-3\sqrt{3})(3\sqrt{3}) = (-3)(3)(\sqrt{3})(\sqrt{3}) = 9(-1)(\sqrt{9}) = -9$

$$2\left(\frac{-54 - 18\sqrt{3}}{8}\right) - \frac{-9+9\sqrt{3}}{4} + 9 = 0$$

$$\frac{-54 - 18\sqrt{3} - 18 + 18\sqrt{3}}{8} + 9 = 0$$

$$-\frac{72}{8} + 9 = 0$$

$$-9 + 9 = 0$$

$$0 = 0 \checkmark$$

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$$\sqrt{-4} = \sqrt{-1} \cdot \sqrt{4}$$

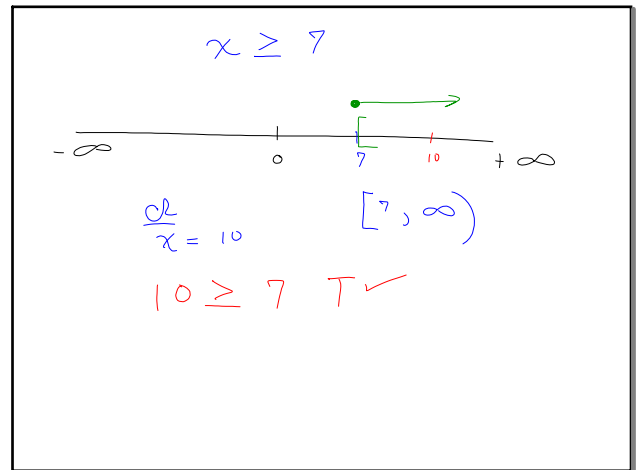
$$= i \cdot 2$$

$$= 2i$$

$$\sqrt{63} = \sqrt{9 \cdot 7} = \sqrt{9} \cdot \sqrt{7}$$

$$= 3\sqrt{7}$$

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