

Algebra II

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13)	$\{1, 5\}$	19)	$\{-9, 11\}$	25)	$\{2 \pm \sqrt{2}\}$
14)	$\{-6, 4\}$	20)	$\{3 \pm i\}$	26)	$\{6 \pm 2\sqrt{6}\}$
15)	$\{\frac{2}{3}\}$	21)	$\{2 \pm \sqrt{6}\}$	27)	$\{\frac{3 \pm 3i\sqrt{3}}{2}\}$
16)	$\{-\frac{3}{2}\}$	22)	$\{-22, 18\}$	28)	$\{\pm \frac{\sqrt{2}}{2}\}$
17)	$\{-7\}$	23)	$\{-\frac{5}{2}, 3\}$	29)	$\{3\}$
18)	$\{-7 \pm \sqrt{5}\}$	24)	$\{-3, \frac{7}{2}\}$	30)	$\{\frac{4}{3}, 3\}$

$$18) \frac{5(x+7)^2}{5} = \frac{25}{5}$$

$$\sqrt{(x+7)^2} = \sqrt{5}$$

$$|x+7| = \sqrt{5}$$

$$x+7 = \pm\sqrt{5}$$

$$x+7-7 = -7 \pm\sqrt{5}$$

$$\{-7 \pm\sqrt{5}\}$$

$$22) x^2 + 4x - 396 = 0$$

$$(x+22)(x-18) = 0$$

$$\{-22, 18\}$$

$$23) (2x+5)(x-3) = 0$$

$$\{-\frac{5}{2}, 3\}$$

$$28) \left(\frac{x+1}{x} - \frac{x}{x+1} = 2 \right) x(x+1)$$

Domain: \mathbb{R} except $\{0, -1\}$

$$(x+1)(x+1) - x \cdot x = 2x(x+1)$$

$$\cancel{x^2} + \cancel{2x} + 1 - \cancel{x^2} = 2x^2 + \cancel{2x}$$

$$1 = 2x^2$$

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

$$\frac{\sqrt{2}}{\sqrt{2}} \frac{1}{\sqrt{2}} = |x|$$

$$\left\{ \pm \frac{\sqrt{2}}{2} \right\}$$