

## Algebra II

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2a)	$\{11, 16\}$	6a)	$\{\pm 2i\sqrt{2}, \pm 1\}$	16)	$\{\frac{1}{9}\}$
b)	$\{-1, -\frac{8}{3}\}$	b)	$\{1\}$	18)	$\{1, 9\}$
c)	$\{\pm 2, \pm 3\}$	8a)	$\{\pm 2i, \pm \frac{\sqrt{2}}{2}\}$	20)	$\{1, \frac{9}{4}\}$
4a)	$\{4, 12\}$	b)	$\{1 \pm 2i, 1 \pm \frac{\sqrt{2}}{2}\}$	22)	$\{\pm 3.30\}$
b)	$\{\pm 2, \pm \frac{2\sqrt{6}}{3}\}$	10)	$\{9\}$	24)	$\{0.14\}$
c)	$\{\frac{1}{2}, \frac{3}{2}\}$	12)	$\{\pm 2i, \pm 2\}$	26)	$\{-5.24, -5,\}$ $\{-1, -0.76\}$
		14)	$\{0, \frac{3}{2}\}$		

$$4c) \quad 3\omega^2 - 8\omega + 4 = 0$$

$$(3\omega - 2)(\omega - 2)$$

$$\frac{3}{\omega} = 2 \quad \frac{1}{\omega} = 2$$

$$\frac{3}{2} = \omega \quad \frac{1}{2} = \omega$$

$$\left\{ \frac{3}{2}, \frac{1}{2} \right\}$$

$$4a) \quad 3\left(\frac{\omega}{6}\right)^2 - 8\left(\frac{\omega}{6}\right) + 4 = 0$$

$$\left(3\frac{\omega}{6} - 2\right)\left(\frac{\omega}{6} - 2\right) = 0$$

$$\frac{3\omega}{6} - 2 = 0 \quad \text{or} \quad \frac{\omega}{6} - 2 = 0$$

$$\frac{\omega}{2} = 2 \quad \frac{\omega}{6} = 2$$

$$\omega = 4 \quad \omega = 12$$

$$\{4, 12\}$$

$$8b) \overset{2,1}{2}(x-1)^4 + 7(x-1)^2 - \overset{4,1}{4} = 0$$

$$[2(x-1)^2 - 1][\overset{4,1}{(x-1)^2} + \overset{2,2}{4}] = 0$$

$$2(x-1)^2 = 1 \quad \sqrt{(x-1)^2} = \sqrt{-4}$$

$$\sqrt{(x-1)^2} = \frac{1}{\sqrt{2}} \quad |x-1| = 2i$$

$$|x-1| = \frac{1}{\sqrt{2} \cdot \sqrt{2}} \quad x-1 = \pm 2i$$

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

$$\left\{ 1 \pm \frac{\sqrt{2}}{2}, 1 \pm 2i \right\}$$