

10) $\{3 \pm \sqrt{16}\}$	$\{6.2, -0.2\}$	18) $\left\{\frac{-1 \pm \sqrt{21}}{4}\right\}$	$\{-1.40, 0.90\}$
2) $\left\{\frac{4 \pm \sqrt{26}}{2}\right\}$	$\{4.5, -0.5\}$	20) $\left\{\frac{3 \pm 2\sqrt{2}}{10}\right\}$ or $\{3 \pm 2\sqrt{2}\}$	$\{0.58, 0.02\}$
4) $\{3 \pm \sqrt{22}\}$	$\{7.69, -1.69\}$	22) $\emptyset$	
6) $\left\{\frac{5 \pm \sqrt{5}}{4}\right\}$	$\{1.81, 0.69\}$		

$$12) -2z^2 + 8z + 5 = 0$$

$$a = -2 \quad b = 8 \quad c = 5$$

$$z = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$z = \frac{-(-8) \pm \sqrt{8^2 - 4(-2)(5)}}{2(-2)}$$

$$= \frac{-8 \pm \sqrt{64 + 40}}{-4} = \frac{-8 \pm \sqrt{104}}{-4}$$

$$= \frac{-8 \pm \sqrt{4 \cdot 26}}{-4} = \frac{-8 \pm 2\sqrt{26}}{-4} = \left\{\frac{4 \pm \sqrt{26}}{2}\right\}$$

reduce by -2

$$14) j^2 - 6j = 13$$

$$j^2 - 6j - 13 = 13 - 13$$

$$j^2 - 6j - 13 = 0$$

$$a = 1 \quad b = -6 \quad c = -13$$

$$j = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$j = \frac{-(-6) \pm \sqrt{(-6)^2 - 4(1)(-13)}}{2(1)}$$

$$j = \frac{6 \pm \sqrt{36 + 52}}{2}$$

$$j = \frac{6 \pm \sqrt{88}}{2} = \frac{6 \pm \sqrt{4 \cdot 22}}{2} = \frac{6 \pm 2\sqrt{22}}{2}$$

$$\left\{3 \pm \sqrt{22}\right\}$$

reduce by 2

$$16) 4v^2 = 10v - 5$$

$$4v^2 - 10v + 5 = 0$$

$$a = 4 \quad b = -10 \quad c = 5$$

$$v = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$v = \frac{-(-10) \pm \sqrt{(-10)^2 - 4(4)(5)}}{2(4)} = \frac{10 \pm \sqrt{100 - 80}}{8} = \frac{10 \pm \sqrt{20}}{8}$$

$$= \frac{10 \pm \sqrt{4 \cdot 5}}{8} = \frac{10 \pm 2\sqrt{5}}{8} = \left\{\frac{5 \pm \sqrt{5}}{4}\right\}$$

$$18) 2r = 5 - 4r^2$$

$$4r^2 + 2r - 5 = 0$$

$$a = 4 \quad b = 2 \quad c = -5$$

$$r = \frac{-2 \pm \sqrt{4 - 4(4)(-5)}}{2(4)}$$

$$r = \frac{-2 \pm \sqrt{84}}{8} = \frac{-2 \pm \sqrt{4 \cdot 21}}{8}$$

$$= \frac{-2 \pm 2\sqrt{21}}{8} = \left\{-\frac{1 \pm \sqrt{21}}{4}\right\}$$