

9, 18, 10, 17, 16

9. $3y^2 = 1 - y$

$$-3y^2$$

$$0 = -3y^2 - y + 1$$

$$a = -3 \quad b = -1 \quad c = 1$$

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

$$x = \frac{1 \pm \sqrt{1 - 4(-3)(1)}}{2(-3)}$$

$$x = \frac{1 \pm \sqrt{13}}{-6}$$

10. $8x = 1 - x^2$

$$-8x$$

$$0 = -8x + 1 - x^2$$

$$a = -1 \quad b = -8 \quad c = 1$$

$$x = \frac{8 \pm \sqrt{64 - 4(-1)(1)}}{2(-1)}$$

$$x = \frac{8 \pm \sqrt{68}}{-2} < \begin{matrix} 4 & \left(\frac{2}{2} \right) \\ & 17 \end{matrix}$$

$$x = \frac{8 \pm 2\sqrt{17}}{-2}$$

$$x = -4 \pm \sqrt{17}$$

$$(-3)^2 = 9$$

$$-3^2 = -(3 \cdot 3)$$

$$16^2 \left(\frac{t^2}{2} + 1 \right) = \left(\frac{t}{5} \right)^2$$

$$5(t^2 + 2) = \left(\frac{2t}{5} \right) 5$$

$$5t^2 + 10 = 2t$$

$$5t^2 - 2t + 10 = 0$$

$$x = \frac{2 \pm \sqrt{4 - 4(5)(10)}}{2(5)}$$

$$x = \frac{2 \pm \sqrt{-196}}{10} = \frac{2 \pm 14i}{10}$$

$$\boxed{x = \frac{1 \pm 7i}{5}} = \frac{1}{5} \pm \frac{7}{5}i$$

$$17. \left(\frac{2m^2 + 16}{8} \right)^{\frac{5}{8}} = (2m)^5$$

$$2m^2 + 16 = 10m$$

$$\frac{2m^2 - 10m + 16}{2} = 0$$

$$m^2 - 5m + 8 = 0$$

$$a = 1 \quad b = -5 \quad c = 8$$

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

$$m = \frac{5 \pm \sqrt{(-5)^2 - 4(1)(8)}}{2(1)}$$

$$m = \frac{5 \pm \sqrt{25 - 32}}{2}$$

$$m = \frac{5 \pm \sqrt{-7}}{2}$$

$$\boxed{m = \frac{5 \pm i\sqrt{7}}{2}}$$

$$18. \left(\frac{4-2y^2}{7} \right) = (2y)7$$

$$4-2y^2 = 14y$$

$$-14y$$

$$-2y^2 - 14y + 4 = 0$$

$$a = -2 \quad b = -14 \quad c = 4$$

$$y = \frac{14 \pm \sqrt{(14)^2 - 4(-2)(4)}}{2(-2)}$$

$$y = \frac{14 \pm \sqrt{228}}{-4} \leftarrow \begin{matrix} 4^2 \cdot 2 \\ 57 \cdot 4 \end{matrix} \begin{matrix} 2 \\ 2 \\ 3 \\ 19 \end{matrix}$$

$$y = \frac{14 \pm 2\sqrt{57}}{-4}$$

$$y = \frac{7 \pm \sqrt{57}}{-2}$$

HW Assessment
4/8/10

$$12. 5 = 4r(2r + 3)$$