Answer Key **Quadratic Formula:** $x = \dfrac{-b \pm \sqrt{b^2 - 4ac}}{2a}$ **HW #_____**

1. $x^2 - 2x - 2 = 0$ $a = 1, b = -2, c = -2$ $x = \dfrac{2 \pm \sqrt{(-2)^2 - 4(1)(-2)}}{2(1)}$ $x = \dfrac{2 \pm \sqrt{12}}{2}$ $x = \dfrac{2 + \sqrt{12}}{2}$ $x = \dfrac{2 - \sqrt{12}}{2}$ $x = \dfrac{2 + 2\sqrt{3}}{2}$ $x = \dfrac{2 - 2\sqrt{3}}{2}$ $x = 1 + \sqrt{3}$ $x = 1 - \sqrt{3}$	2. $x^2 - 4x - 2 = 0$ $a = 1, b = -4, c = -2$ $x = \dfrac{4 \pm \sqrt{(-4)^2 - 4(1)(-2)}}{2(1)}$ $x = \dfrac{4 \pm \sqrt{24}}{2}$ $x = \dfrac{4 + \sqrt{24}}{2}$ $x = \dfrac{4 - \sqrt{24}}{2}$ $x = \dfrac{4 + 2\sqrt{6}}{2}$ $x = \dfrac{4 - 2\sqrt{6}}{2}$ $x = 2 + \sqrt{6}$ $x = 2 - \sqrt{6}$
3. $2x^2 - 3x - 8 = 0$ $a = 2, b = -3, c = -8$ $x = \dfrac{3 \pm \sqrt{(-3)^2 - 4(2)(-8)}}{2(2)}$ $x = \dfrac{3 \pm \sqrt{73}}{4}$ $x = \dfrac{3 + \sqrt{73}}{4}$ $x = \dfrac{3 - \sqrt{73}}{4}$	4. $-x^2 - 2x + 5 = 0$ $a = -1, b = -2, c = 5$ $x = \dfrac{2 \pm \sqrt{(-2)^2 - 4(-1)(5)}}{2(-1)}$ $x = \dfrac{2 \pm \sqrt{24}}{-2}$ $x = \dfrac{2 + \sqrt{24}}{-2}$ $x = \dfrac{2 - \sqrt{24}}{-2}$ $x = \dfrac{2 + 2\sqrt{6}}{-2}$ $x = \dfrac{2 - 2\sqrt{6}}{-2}$ $x = -1 - \sqrt{6}$ $x = -1 + \sqrt{6}$
5. $x^2 - 7x + 6 = 0$ $a = 1, b = -7, c = 6$ $x = \dfrac{7 \pm \sqrt{(-7)^2 - 4(1)(6)}}{2(1)}$ $x = \dfrac{7 \pm \sqrt{25}}{2}$ $x = \dfrac{7 + \sqrt{25}}{2}$ $x = \dfrac{7 - \sqrt{25}}{2}$ $x = \dfrac{7 + 5}{2}$ $x = \dfrac{7 - 5}{2}$ $x = 6$ $x = 1$	6. $9x^2 - 12x + 1 = 0$ $a = 9, b = -12, c = 1$ $x = \dfrac{12 \pm \sqrt{(-12)^2 - 4(9)(1)}}{2(9)}$ $x = \dfrac{12 \pm \sqrt{108}}{18}$ $x = \dfrac{12 + \sqrt{108}}{18}$ $x = \dfrac{12 - \sqrt{108}}{18}$ $x = \dfrac{12 + 6\sqrt{3}}{18}$ $x = \dfrac{12 - 6\sqrt{3}}{18}$ $x = \dfrac{2 + \sqrt{3}}{3}$ $x = \dfrac{2 - \sqrt{3}}{3}$