

Name:

Date:

Period:

HW #7-8: Solving Quadratic Equations using the Quadratic Formula

Example: Solve $9x^2 - 11 = 6x$

① Set eqn = 0!!!

② plug in a, b, c
to quad. formula
& simplify

$$ax^2 + bx + c = 0 \rightarrow x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$9x^2 - 6x - 11 = 0$$

$$x = \frac{-(-6) \pm \sqrt{(-6)^2 - 4(9)(-11)}}{2(9)}$$

$$x = \frac{6 \pm \sqrt{36 + 396}}{18}$$

$$x = \frac{6 \pm \sqrt{432}}{18}$$

cannot simplify
 $\frac{6}{18}$ yet!!!

$$x = \frac{6 \pm \sqrt{16 \cdot 27}}{18}$$

$$x = \frac{6 \pm \sqrt{16 \cdot 9 \cdot 3}}{18}$$

$$x = \frac{6 \pm 4 \cdot 3\sqrt{3}}{18}$$

$$x = \frac{6 \pm 12\sqrt{3}}{18}$$

$$x = \frac{1 \pm 2\sqrt{3}}{3}$$

$$x = \frac{1 \pm 2\sqrt{3}}{3}$$

$$1. 2n^2 - n - 4 = 2$$

$$x = \frac{1 + 2\sqrt{3}}{3} \text{ or } x = \frac{1 - 2\sqrt{3}}{3}$$

$$2. 4x^2 + 4x - 8 = 1$$

Continued on back side →

3. $3a^2 = 6a - 3$

4. $x^2 + 4x + 3 = 0$

5. $2m^2 - 7m - 13 = -10$

6. $x^2 = -3x + 40$