Name:_____ Hour: _____ Date: _____

NOTES: Section 9.2 – Solving Quadratic Equations by Finding Square Roots.

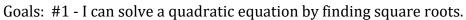Goals: #1 - I can solve a quadratic equation by finding square roots.   😎   😬   😢

Homework: Section 9.2 Worksheet

Warm Up: Evaluate the expression. Give the exact value if possible. Otherwise, approximate to the nearest hundredth.

1. $-\sqrt{81}$

2. $8 \pm \sqrt{8}$

3. $\frac{7 \pm 3\sqrt{12}}{-6}$

Exploration #1: Work with a partner and answer the following questions.

1. What is the *inverse operation* of squaring a number?

2. What is the difference between an *expression* and an *equation*?

3. Solve: $x^2 = 16$

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Notes:

A _____ is an equation that can be written in the standard form:

$$ax^2 + bx + c = 0$$

There are various _____ to solve quadratic equations. Let's took a look at one method!

Example #1: Solve the equation. Write the solutions as integers if possible. Otherise, write them as a radical expression.

    1. $x^2 = 4$ 2. $n^2 = 5$

You practice: Solve the equation. Write the solutions as integers if possible. Otherise, write them as a radical expression.

    1. $x^2 = 81$ 2. $n^2 = 10$

    3. $x^2 = 0$ 4. $y^2 = -1$

Example #2: Solve the equation.

    1. $3x^2 - 48 = 0$ 2. $27 - 3y^2 = 0$

You practice: Solve the equation.

    1. $6x^2 - 150 = 0$ 2. $2x^2 - 72 = 0$

    3. $7x^2 + 30 = 9$ 4. $2y^2 + 13 = 41$