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| **Objectives:**  Simplifying Radicals.

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| A square root is in simplest form when1. the radicand contains no perfect square factors2. the radicand is not a fraction3. there are no radicals in the denominator of a fraction.The square root of -1 is the imaginary number *i*.Solve quadratic equations.Also, please know that 2nd degree functions in *x* will graph parabolas that will either be concave up or down. These quadratic functions will be of the form f(x) = y = ax2 + bx + c.Use your TI-84 calculator to graph these functions.Be able to identify the following:* Vertex
* Axis of Symmetry
* Type of Concavity (Up or Down)
* Minimum or Maximum Value
* Y-Intercept
* X-Intercept(s) if Any
* Know that X-Intercepts are also known as zeros!

***MONDAY (10.14.24)* STUDENT HOLIDAY** |

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***WEDNESDAY (10.16.24****)*

**Discuss** the previously assigned problems: Practice \_\_ Graphing Parabolas (Handout)

**Class Work/Homework:** Parabolas, The Pythagorean Theorem (Handout)

***FRIDAY (10.18.24****)*

**Discuss the previously assigned problems:** Parabolas, The Pythagorean Theorem (Handout).

**Class Work/Homework**: Practice SAT Questions:

**(1)** If 36 + 3(4*x* − 9) = *c*(2*x* + 1) + 25 has no solution and c is a constant, what is the value of c?

A. -3
B. 3
C. 6
D. 12

**(2)** An amusement park is building a scale model of an airplane for a 3D ride. The real airplane measures 220 feet, 6 inches from nose to tail.

The amusement park plans to make the ride 36 feet, 9 inches long. If the wingspan of the real plane is 176.5 feet, how long in inches should the wingspan on the ride be?

(1 foot = 12 inches)

A. 7 feet, 3 inches
B. 29 feet, 5 inches
C. 35 feet, 2 inches
D. 45 feet, 11 inches

**(3)** If a + 2 > 5 and a − 4 < 1, then which of the following could be a value for a?

A. 3
B. 4
C. 5
D. 6

**(4)** Mr. Borgenthorp is designing a rectangular pen for his horse. One side of the pen will be blocked by a steep hill, and the other three sides of the pen will be fenced off with wire. If the farmer has 20 meters of wire, what is the maximum area of the pen that he can build in square meters?

**(5)** Which of the following functions represents a parabola that has a vertex located at

(-3,4), and that passes through the point (–1, –4)?

A. f(x) = x2 + 6x + 13

B. f(x) = –2x2 – 12x – 14

C. f(x) = x2 – 5

D. f(x) = 2x2 + 4x – 2

E. f(x) = 2x2 – 12x – 14