

Quiz Monday

Know all the methods for solving and when to use each method:

- Factoring
- Graphing
- Complete the Square
- Quadratic Formula ***(YOU MUST MEMORIZE IT!!!!)***

Know how to go from standard form to vertex form and intercept form (see green homework)

- 1 real world discriminant question
- 2 real world problems

Solve the following each of the four ways

$$2x^2 - 6x = 8$$

Factoring *Factor out the GCF first!	Complete the Square *divide everything by 2 first
Quadratic Formula	Graphing (SKETCH a picture of it- label the x-intercepts)

When is the square root method the best?

When is factoring the best method?

When is completing the square a good method?

When is the quadratic formula the best method?

When is graphing the best method?

(There is a back!)

Match which method is best to use for the following four equations. You can only use each method once. Then solve each equation.

- a. Square Root Method b. Factoring c. Completing the Square d. Quadratic Formula

1. $7x^2 - 5x - 5 = 0$ _____

3. $8x^2 + 9x + 2 = 1$ _____

2. $x^2 + 12x = 5$ _____

4. $36x^2 - 64 = 0$ _____

5. The height above the ground in meters of a model rocket on a particular launch can be modeled by the equation $h(t) = -4.9t^2 + 102t + 100$, where t is the time in seconds after its engine burns out 100 m above the ground. Will the rocket reach a height of 600 m? Use the discriminant to explain your answer.

6. Your friend tosses a ball in the air. The equation $h(t) = -8t^2 + 18t + 5$ models the height of the ball t seconds after it was thrown.

a. How long was the ball in the air? Factor to solve.

b. How high did the soccer ball get? Use any method.