

## Quiz #10 - Solving Quadratic Equations

Name: \_\_\_\_\_ Class: \_\_\_\_\_

**This is due by Monday, March 23!**

- 1.) Solve the following equation by factoring:  $x^2 - 13x = 2x^2 - 7x + 5$  **(5 points)**

- 2.) Solve the following equation by factoring:  $x^2 = 14x$  **(4 points)**

- 3.) Solve the following equation by square rooting:

$$2x^2 = 100 \text{ (5 points)}$$

- 4.) Solve the following quadratic equation by square rooting. Leave your answer in simplest radical form.

$$3(x - 5)^2 = 24 \text{ (5 points)}$$

- 5.) Solve the following proportion.

$$\frac{2x}{x+3} = \frac{x+1}{4} \text{ (5 points)}$$

- 6.) Find the value of  $c$  that completes the square.  $x^2 + 22x + c$  **(3 points)**

7.) Solve the following quadratic equation by completing the square. Leave the answer in simplest radical form. **(5 points)**

$$p^2 + 12p - 54 = 0$$

8.) Solve the following quadratic equation using the quadratic formula. Leave the answer in simplest radical form. **(5 points)**

$$2x^2 + 23 = 14x$$

9.) Solve the following quadratic equation using the methods below. **(9 points)**

$$x^2 - 7x = -x^2 + 4$$

Factoring	Completing the Square	Quadratic Formula

10.) Find the quadratic equation that has a solution of  $\{-3,4\}$ . **(4 points)**

**\*Bonus\* (1 point)**

Factor completely:  $5x^9 - 85x^5 + 80x$