

Name: \_\_\_\_\_  
8A; CC Algebra

Date: \_\_\_\_\_  
Period \_\_\_\_\_

Take home quiz #11

Due: \_\_\_\_\_

Directions: Show **ALL** work for each problem. 5 points each.

1. Which of the following would complete the square for this expression:  $x^2 + 2x$

- A) 1
  - B) 4
  - C) 9
  - D) 16
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2. Solve by completing the square:  $x^2 + 8x + 15 = 0$

- A)  $x = -5, -3$
  - B)  $x = -5, 3$
  - C)  $x = 5, -3$
  - D)  $x = 5, 3$
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3. Find the value that will complete the square for this expression:  $x^2 - 24x$

- A) -12
  - B) 144
  - C) -576
  - D) -144
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4. Which of the following values will complete the square for this expression?  $x^2 - \frac{1}{2}x$

- A)  $\frac{1}{4}$
  - B)  $\frac{1}{8}$
  - C)  $\frac{1}{16}$
  - D)  $\frac{1}{32}$
- 

5. Which is true about the following quadratic equation:  $2x^2 + 3x = 4$

- A)  $a = 2, b = -3, c = 4$
- B)  $a = 2, b = 3, c = -4$
- C)  $a = 2, b = -3, c = -4$
- D)  $a = 2, b = -3, c = 0$

6. Find the exact solutions of  $(x + 1)^2 + 4 = 7$

A)  $\{-1 - \sqrt{3}, -1 + \sqrt{3}\}$

B)  $\{1 - \sqrt{3}, 1 + \sqrt{3}\}$

C)  $\{\sqrt{7}, -\sqrt{7}\}$

D)  $\{\sqrt{2}, -\sqrt{2}\}$

7. A) Find the value of the discriminant for:  
 $2x^2 - 6x - 3 = 0$

B) Describe the nature of the roots

8. True or False: The expression:  $x^2 + 8x + 16$  is a perfect square trinomial. Factor to prove your answer choice.

9. Solve the following quadratic equation using the Quadratic Formula:  $3x^2 + 10x - 25 = 0$

10. Solve the following quadratic equation by Completing the Square:  $x^2 - 4x = 21$