

**Algebra 2A**  
**Quiz Review on 4-5 & 4-6**

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

Date: \_\_\_\_\_ Hr: \_\_\_\_\_

**ALL WORK**

For #1-3, solve each equation by factoring.

1.  $x^2 - x - 30 = 0$

1. \_\_\_\_\_

2.  $x^2 - 10x = -21$

2. \_\_\_\_\_

3.  $x^2 = -12x$

3. \_\_\_\_\_

For #1-3, solve each equation by using tables and/or by graphing. Round answers to two decimal places.

4.  $10x^2 + 26x + 16 = 0$

4. \_\_\_\_\_

5.  $5x^2 - 13x = 28$

5. \_\_\_\_\_

6.  $4x^2 + 27x = 12$

6. \_\_\_\_\_

For #7-9, solve each equation by factoring, using tables, or by graphing. If necessary, round your answer to the nearest hundredth.

7.  $x^2 + x = 12$

7. \_\_\_\_\_

8.  $16x^2 - 25 = 0$

8. \_\_\_\_\_

9.  $x^2 - 2x - 4 = 0$

9. \_\_\_\_\_

10. The students in Mr. Wilson's Physics class are making golf ball catapults. The flight of group A's ball is modeled by the equation  $y = -0.014x^2 + 0.68x$ , where  $x$  is the ball's distance from the catapult. The units are in feet.

a.) How far did the ball fly?

b.) How high above the ground did the ball fly?

c.) What is a reasonable domain for this function?

d.) What is a reasonable range for this function?

10.

a.) \_\_\_\_\_

b.) \_\_\_\_\_

c.) \_\_\_\_\_

d.) \_\_\_\_\_

**For # 11-12, solve each equation by finding square roots. SHOW ALL YOUR WORK.**

11.  $x^2 + 4 = 20$

11. \_\_\_\_\_

12.  $4x^2 - 100 = 0$

12. \_\_\_\_\_

13. You are painting a large mural. The wall length is 3 times the height. The area of the wall is  $300 \text{ ft}^2$ . What are the dimensions of the wall?

13. \_\_\_\_\_

For #14-5, solve each equation by first factoring the perfect square trinomial. SHOW ALL YOUR WORK.

4.  $-14x + 49 = 81$

14. \_\_\_\_\_

15.  $4x^2 + 36x + 81 = 16$

15. \_\_\_\_\_

For #16-17, complete the following squares.

16.  $x^2 + 20x + \underline{\hspace{2cm}}$

16. \_\_\_\_\_

17.  $x^2 = 24x + \underline{\hspace{2cm}}$

17. \_\_\_\_\_

For #18-19, solve each equation by completing the square. SHOW ALL YOUR WORK.

18.  $x^2 - 8x - 5 = 0$

18. \_\_\_\_\_

19.  $2x^2 + 11x - 23 = -x + 3$

19. \_\_\_\_\_

For #20, rewrite the equation in vertex form. SHOW ALL YOUR WORK.

20.  $y = x^2 - 18x + 13$

20. \_\_\_\_\_

