

**Chapter 9**  
**Form B**

For problems 1 – 2, express each number in terms of  $i$ .

1.  $\sqrt{-225}$

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

2.  $\sqrt{-200}$

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

3. Solve by the square root property:  $7x^2 = 63$ .

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

4. Solve by completing the square:  $x^2 - 8x + 2 = 0$ .

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

5. Solve by the quadratic formula:  $3x^2 - 4x + 2 = 0$ .

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

For problems 6 – 11, solve each equation by the method of your choice.

6.  $x^2 + 49 = 0$

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

7.  $2x^2 + 10x + 8 = 0$

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

8.  $(3x + 2)^2 = 27$

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

9.  $(x - 1)(3x + 5) = 16$

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

10.  $x^2 - 4x = -5$

10. \_\_\_\_\_

11.  $4x^2 - 3 = -2x$

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

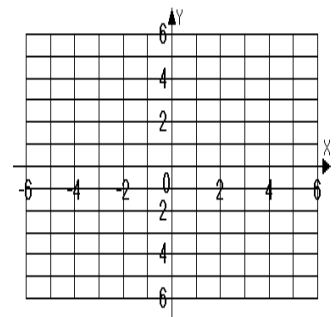
For problems 12 – 13, use the equation  $y = -3x^2 - 4x + 4$ .

12. Find the  $x$ -intercepts and  $y$ -intercept. If the  $x$ -intercepts are irrational numbers, round your answers to the nearest tenth.

12.  $x$ -int. \_\_\_\_\_  
 $y$ -int. \_\_\_\_\_

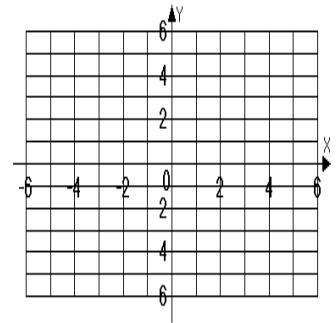
13. Find the vertex, and graph the parabola. Label the  $x$ -intercepts,  $y$ -intercept, and the vertex.

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

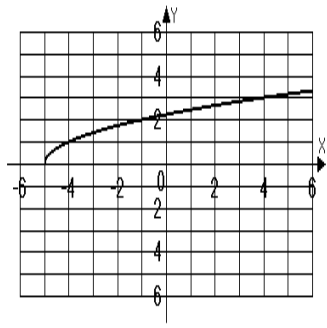


For problems 14 – 15, use the equation  $y = x^2 + 6x + 5$ .

14. Find the  $x$ -intercepts and  $y$ -intercept. If the  $x$ -intercepts are irrational numbers, round your answers to the nearest tenth.  
 14.  $x$ -int. \_\_\_\_\_  
            $y$ -int. \_\_\_\_\_
15. Find the vertex and graph the parabola. Label the  $x$ -intercepts,  $y$ -intercept, and vertex.  
 15. vertex \_\_\_\_\_



16. The formula  $h(s) = -32s^2 + 400s + 8$  models a rocket's height,  $h$ , in feet,  $s$  seconds after launching. Find and interpret  $h(5)$ .  
 16. \_\_\_\_\_
17. Is the relation  $\{(3, 8)(3, 4)(3, -1)\}$  a function? Give the domain and range for the relation.  
 17. Function? \_\_\_\_\_  
           Domain \_\_\_\_\_  
           Range \_\_\_\_\_
18. Is the graph shown in the figure a function? Explain why or why not.  
 18. Function? \_\_\_\_\_  
           Explain \_\_\_\_\_



19. If  $f(x) = \sqrt{1-6x}$ , find  $f(-8)$ .  
 19. \_\_\_\_\_
20. Leo builds a square garden with each side eight feet long. Leo wants to buy a water hose to reach diagonally across the garden. How long should the hose be? Express your answer in simplified radical form and then approximated to the nearest tenth.  
 20. \_\_\_\_\_