

Chapter 10
Form B

For problems 1 – 2, simplify each number.

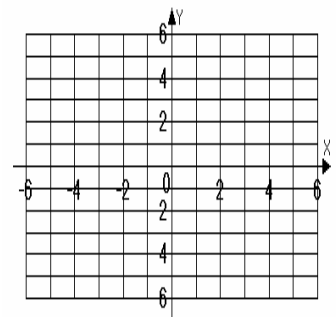
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|----|---|----|-------|
| 1. | $\sqrt{-225}$ | 1. | _____ |
| 2. | $\sqrt{-200}$ | 2. | _____ |
| 3. | Solve by the square root property: $7x^2 = 63$. | 3. | _____ |
| 4. | Solve by completing the square: $x^2 - 8x + 2 = 0$. | 4. | _____ |
| 5. | Solve by the quadratic formula: $3x^2 - 4x + 2 = 0$. | 5. | _____ |

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

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|-----|------------------------|-----|-------|
| 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 $y = -3x^2 - 4x + 4$.

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|-----|--|-----|------------------------------------|
| 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 _____ |



Name _____

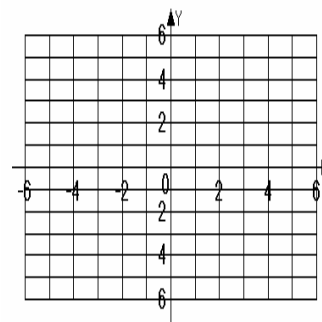
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For problems 14 – 15, use the equation $y = x^2 + 6x + 5$.

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

14. x -int. _____
 y -int. _____

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 $h(5)$.

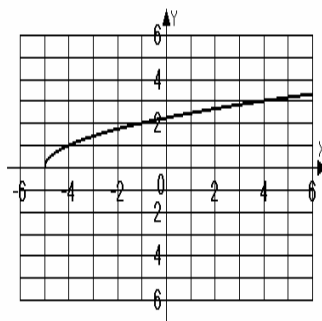
16. _____

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. _____