

Chapter 9
Form C

For problems 1 – 2, simplify each number.

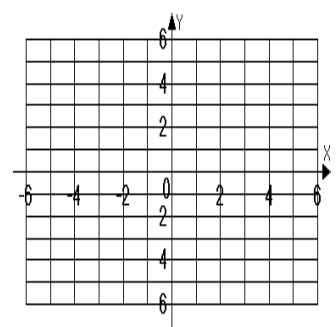
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|----|--|----|-------|
| 1. | $\sqrt{36}$ | 1. | _____ |
| 2. | $\sqrt{-288}$ | 2. | _____ |
| 3. | Solve by the square root property: $(5y + 3)^2 = 25$. | 3. | _____ |
| 4. | Solve by completing the square: $x^2 + 12x + 4 = 0$. | 4. | _____ |
| 5. | Solve by the quadratic formula: $2x^2 - 4x + 3 = 0$. | 5. | _____ |

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

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|-----|-----------------------|-----|-------|
| 6. | $5x^2 + 2x + 1 = 0$ | 6. | _____ |
| 7. | $9x^2 + 16 = 0$ | 7. | _____ |
| 8. | $x^2 + 4x = -4$ | 8. | _____ |
| 9. | $(x - 1)(x + 4) = -4$ | 9. | _____ |
| 10. | $10x^2 + 3 = 11x$ | 10. | _____ |
| 11. | $(3x + 2)^2 = 6$ | 11. | _____ |

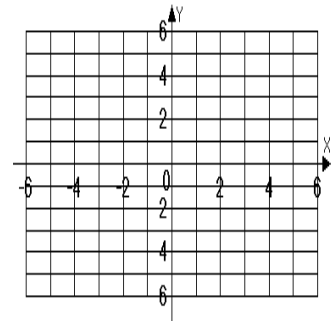
For problems 12 – 13, use the equation $y = -x^2 + 4x$.

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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 _____ |

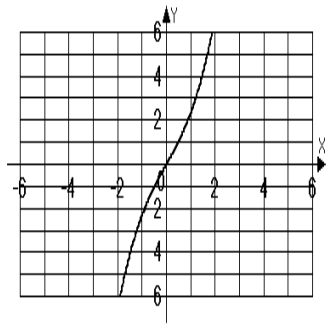


For problems 14 – 15, use the equation $y = 6x^2 - 12x + 4$.

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 function $P(x) = -4x^2 + 20x + 10$ models the profit, P , in thousands of dollars for x units sold. What is the maximum profit that can be made? 16. _____
17. Is the relation $\{(1, 5)(2, 7)(3, 9)\}$ 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 $g(x) = \frac{x}{|x|}$, find $g(-2)$. 19. _____
20. A 52-inch diagonal television has a square screen. How long are the sides of the screen? Express your answer in simplified radical form and approximated to the nearest tenth. 20. _____