

Name _____ Date _____

Chapter 7
Form C

For problems 1 – 13, factor completely or state that the polynomial is prime.

1. $x^3 - 9x$ 1. _____

2. $x^2 - 3x - 108$ 2. _____

3. $50x^4y + 40x^3y^2 + 8x^2y^3$ 3. _____

4. $3x^2y^3 - 21x^3y^4$ 4. _____

5. $2y^3 + y^2 - 18y - 9$ 5. _____

6. $25x^2 - 4$ 6. _____

7. $128x^4 - 162$ 7. _____

8. $32x^2 - 52x - 45$ 8. _____

9. $8x^3 - 125$ 9. _____

10. $9x^2 - 72x + 144$ 10. _____

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11. $x^2 - 6x - 7$

11. _____

12. $y^3 + 4y^2 - 5y - 20$

12. _____

13. $49x^2 + 25$

13. _____

For problems 14 – 18, solve each quadratic equation.

14. $4x^2 = 16$

14. _____

15. $x^2 - 8x = 20$

15. _____

16. $4x(x + 3) = -9$

16. _____

17. $6x^2 + x - 2 = 0$

17. _____

18. $(x + 5)(x - 4) = 10$

18. _____

19. A rock is thrown from the top of a building. The formula $h = -16t^2 - 6t + 27$ describes the height of the rock, h , in feet, t seconds after the rock is thrown. How long after the rock is thrown does it hit the ground?

19. _____

20. The length of a rectangular garden is 4 feet greater than the width. The area of the rectangle is 96 square feet. Find the length and width.

20. _____