

Chapter 6
Form A

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

1. $x^2 - x - 12$ 1. _____

2. $x^3 - 64x$ 2. _____

3. $12x^2 - 12xy + 3y^2$ 3. _____

4. $24x^2 - 22x - 10$ 4. _____

5. $9x^2 + 25$ 5. _____

6. $8x^3 - 125$ 6. _____

7. $x^2y^3 + x^2y^2 - 6x^2y - 6x^2$ 7. _____

8. $12x^2 + 4x - 5$ 8. _____

9. $x^4 - 625$ 9. _____

10. $x^3y + 2x^2y + xy$ 10. _____

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11. $-4x^3 + 8x$

11. _____

12. $x^2 + 5x - 6$

12. _____

13. $y^3 - 4y^2 - 25y + 100$

13. _____

For problems 14 – 18, solve each quadratic equation.

14. $x^2 + 13x + 36 = 0$

14. _____

15. $12x^2 - 11x = 5$

15. _____

16. $9x^2 = 25$

16. _____

17. $x(x - 4) = 12$

17. _____

18. $(2x - 7)(x - 2) = 5$

18. _____

19. A ball falls off the top of a roof 320 feet above the ground. The formula $h = -16t^2 + 16t + 320$ describes the height of the ball above the ground, h , in feet, t seconds after the fall begins. How long will it take the ball to strike the ground?

19. _____

20. The length of a rectangular garden is 6 feet greater than the width. The area of the rectangle is 135 square feet. Find the length and the width.

20. _____