

Name _____ Date _____

Chapter 7
Form B

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

1. $x^2 + 4x + 3$ 1. _____

2. $x^3 + 5x^2 - 4x - 20$ 2. _____

3. $6x^2y + 2xy^2$ 3. _____

4. $16x^2 - 48xy + 36y^2$ 4. _____

5. $64x^3 - 27$ 5. _____

6. $4x^2 + 9$ 6. _____

7. $16x^2 + 22x - 3$ 7. _____

8. $x^4 - 5x^3 - 14x^2$ 8. _____

9. $49y^2 + 14y + 1$ 9. _____

10. $y^3 + 4y^2 - 8y - 32$ 10. _____

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11. $5x^2 - 25x - 120$

11. _____

12. $81x^4 - 16$

12. _____

13. $18y^4 - 6y^3 - 40y^2$

13. _____

For problems 14 – 18, solve each quadratic equation.

14. $x^2 - 8x + 16 = 0$

14. _____

15. $2x(x + 5) = 100$

15. _____

16. $25x^2 = 16$

16. _____

17. $(4x + 1)(3x - 2) = 91$

17. _____

18. $x^2 + 4x + 3 = 0$

18. _____

19. The length of a rectangle is 2 more than three times the width. If the area of the rectangle is 161 square feet, find the length and the width.

19. _____

20. A water balloon is released from a window 96 feet above the ground. The formula $h = -16t^2 + 16t + 96$ describes the height of the water balloon above the ground, h , in feet, t seconds after the release. How long will it take the water balloon to strike the ground?

20. _____