

Name _____

Date _____

Additional Exercises 5.6
Form I
Dividing Polynomials by Binomials

Divide using long division.

1.
$$\frac{x^2 + 11x + 30}{x + 6}$$

1. _____

2.
$$\frac{x^2 - 4x - 5}{x + 1}$$

2. _____

3.
$$\frac{x^2 + 4x + 4}{x + 2}$$

3. _____

4.
$$\frac{x^2 - 9}{x - 3}$$

4. _____

5.
$$\frac{x^2 + x - 6}{x + 3}$$

5. _____

6.
$$\frac{x^2 - x - 20}{x - 5}$$

6. _____

7.
$$\frac{x^2 - 6x - 27}{x + 3}$$

7. _____

8.
$$\frac{x^2 + 15x + 56}{x + 7}$$

8. _____

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9. $\frac{x^2 - x - 30}{x - 6}$

9. _____

10. $\frac{x^2 + 8x - 9}{x + 9}$

10. _____

11. $\frac{6x^2 - x - 2}{2x + 1}$

11. _____

12. $\frac{7m^2 + 42m - 49}{m + 7}$

12. _____

13. $\frac{7m^3 + 11m^2 + 2m + 16}{m + 2}$

13. _____

14. $\frac{6r^3 - 43r^2 - 36r - 32}{r - 8}$

14. _____

15. $\frac{-20x^3 + 27x^2 + 7x - 12}{-4x + 3}$

15. _____

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Additional Exercises 5.6
Form II
Dividing Polynomials by Binomials

Divide using long division.

1.
$$\frac{x^2 - 4x - 5}{x - 1}$$

1. _____

2.
$$\frac{x^2 - 10x - 25}{x - 5}$$

2. _____

3.
$$\frac{x^2 + 4x - 14}{x + 6}$$

3. _____

4.
$$\frac{x^3 + 6x - 9}{x - 3}$$

4. _____

5.
$$\frac{x^3 + 8}{x + 2}$$

5. _____

6.
$$\frac{27x^3 + 64}{3x + 4}$$

6. _____

7.
$$\frac{p^2 + 4p - 27}{p + 8}$$

7. _____

8.
$$\frac{x^2 + 11x + 21}{x + 3}$$

8. _____

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9. $\frac{6x^2 + 7x - 20}{3x - 4}$

9. _____

10. $\frac{6y^3 - 8y + 5}{2y - 4}$

10. _____

11. $\frac{x^4 - 2x + 5}{x - 2}$

11. _____

12. $\frac{3x^3 - 5x^2 + 2x - 1}{x - 2}$

12. _____

13. $\frac{y^3 - 1}{y + 1}$

13. _____

14. $\frac{r^4 - 16}{r + 2}$

14. _____

15. $\frac{x^3 + 3x^2 + 5x + 3}{x + 1}$

15. _____

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Additional Exercises 5.6
Form III
Dividing Polynomials by Binomials

Divide using long division.

1.
$$\frac{5x^2 - 12x + 16}{5x - 2}$$

1. _____

2.
$$\frac{8y^3 - 22y^2 - 5y + 12}{4y + 3}$$

2. _____

3.
$$\frac{y^6 - 13y^3 + 42}{y^3 - 7}$$

3. _____

4.
$$\frac{a^4 + 9a^2 + 20}{a^2 + 4}$$

4. _____

5.
$$\frac{y^4 - 6y^2 + 9}{y - 3}$$

5. _____

6.
$$\frac{2y^3 - 9y^2 + 11y - 3}{2y - 3}$$

6. _____

7.
$$\frac{3x^4 - 4x^3 - x^2 - 16x - 12}{3x + 2}$$

7. _____

8.
$$\frac{x^3 - 7x + 10}{x + 3}$$

8. _____

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9. $\frac{x^3 - x^2 + x - 1}{x - 1}$

9. _____

10. $\frac{y^4 + 2y^3 - y - 2}{y + 2}$

10. _____

11. $\frac{x^4 - x^3 + 3x^2 - 2x + 2}{x^2 + 2}$

11. _____

12. $\frac{6x^3 - 8x^2 - 2x + 21}{3x + 2}$

12. _____

13. $\frac{x^3 - 64}{x - 4}$

13. _____

14. $\frac{a^4 - a^3 + 3a^2 - 2a + 2}{a^2 + 2}$

14. _____

15. $\frac{15x^3 - 25x^2 - 2x + 26}{-3x + 2}$

15. _____