

Practice 11–3**Dividing Polynomials**

Divide.

1. $\frac{10x - 25}{5}$

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

3. $(3x^2 - 6x) \div 3x$

4. $(10x^2 - 6x) \div 2x$

5. $(-8x^5 + 16x^4 - 24x^3 + 32x^2) \div 8x$

6. $(15x^2 - 30x) \div 5x$

7. $(x^2 - 14x + 49) \div (x - 7)$

8. $(2x^2 - 13x + 21) \div (x - 3)$

9. $(4x^2 - 16) \div (2x + 4)$

10. $(x^2 + 4x - 12) \div (x - 2)$

11. $(x^2 + 10x + 16) \div (x + 2)$

12. $(12x^2 - 5x - 2) \div (3x - 2)$

13. $(x^2 + 5x + 10) \div (x + 2)$

14. $(x^2 - 8x - 9) \div (x - 3)$

15. $(3x^2 - 2x - 13) \div (x - 2)$

16. $(x^3 + 3x^2 + 5x + 3) \div (x + 1)$

17. $(5 - 23x + 12x^2) \div (4x - 1)$

18. $(24 + 6x^2 + 25x) \div (3x - 1)$

19. $(2x^2 + 11x - 5) \div (x + 6)$

20. $(x^2 + 5x - 10) \div (x + 2)$

21. $(8x + 3 + 4x^2) \div (2x - 1)$

22. $(3x^2 + 11x - 4) \div (3x - 1)$

23. $(x^3 + x - x^2 - 1) \div (x - 1)$

24. $(10 + 21x + 10x^2) \div (2x + 3)$

25. $(6x^2 - 35x + 36) \div (3x - 4)$

26. $(-2x^2 - 33x + x^3 - 7) \div (x - 7)$

27. The volume of a rectangular prism is $15x^3 + 38x^2 - 23x - 6$. The height of the prism is $5x + 1$, and the width of the prism is $x + 3$. Find the length of the prism.

28. The width of a rectangle is $x + 1$, and the area is $x^3 + 2x^2 - 5x - 6$ cm. What is the length of the rectangle?