

## 7.3

### Practice A

In Exercises 1–6, simplify the expression, if possible.

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

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

3.  $\frac{x^2 - 4x - 5}{x^2 - 7x + 10}$

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

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

6.  $\frac{x^2 - 3x - 4}{x^3 + 1}$

In Exercises 7–12, find the product.

7.  $\frac{54x^4y^2}{y^4} \cdot \frac{x^3y^2}{9x^5y^3}$

8.  $\frac{x^3(x+2)}{x-1} \cdot \frac{(x-1)(x-3)}{x^4}$

9.  $\frac{x^2(x-5)}{x+7} \cdot \frac{(x+7)(x-1)}{4x^2}$

10.  $\frac{x^2 - 5x}{x+3} \cdot \frac{x^2 + 4x + 3}{x}$

11.  $\frac{x^2 + 3x}{x-2} \cdot \frac{x^2 - 5x + 6}{4x}$

12.  $\frac{x^2 - 4x - 5}{x^2 + 6x + 9} \cdot \frac{2x^2 + 6x}{x^2 + 3x + 2}$

In Exercises 14–17, find the quotient.

14.  $\frac{28x^4y}{y^7} \div \frac{y^9}{2x^5}$

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

16.  $\frac{4x^2 + 12x}{x^2 + 2x - 3} \div \frac{4x}{5x - 5}$

17.  $\frac{x^2 + 5x - 14}{x+3} \div (x^2 - 4x + 4)$

In Exercises 1–6, simplify the expression, if possible.

1.  $\frac{4x^3}{3x^3 + 7x}$

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

3.  $\frac{2x^2 - 5x}{x^2 + 7x + 12}$

In Exercises 13–16, find the quotient.

13.  $\frac{2x^3 + 10x^2}{x^2 + x - 20} \div \frac{2x^2}{x-4}$

14.  $\frac{x^2 - 10x + 21}{x+2} \div (x^2 - 14x + 49)$

15.  $\frac{x^2 - 2x - 3}{x^2 + 2x - 8} \div \frac{x^2 + 4x + 3}{x^2 + 6x + 8}$

16.  $\frac{x^2 + x - 6}{x^2 + 7x + 12} \div \frac{x^2 - 5x + 6}{x^2 + x - 12}$