

43.  $\frac{y^2 - 9x^2}{(3x - y)^2}$       44.  $\frac{(2x - y)^2}{y^2 - 4x^2}$       45.  $\frac{2x^2 + x - 6}{x^2 + x - 2}$       46.  $\frac{6x^2 - x - 1}{2x^2 + 9x - 5}$
47.  $\frac{x - 12 + 6x^2}{17x - 12 - 6x^2}$       48.  $\frac{2x - 30 + 4x^2}{15 - 16x + 4x^2}$       49.  $\frac{8y^3 - 27}{4y^2 - 9}$       50.  $\frac{8y^3 - 1}{4y^2 - 1}$
51.  $\frac{6x^2y^2 + 7xy - 3}{4x^2y^2 + 4xy - 3}$       52.  $\frac{8x^2y^2 - 18xy + 7}{6x^2y^2 + 7xy - 5}$       53.  $\frac{2a^2 + 3ab - 2b^2}{a^2 - 4b^2}$
54.  $\frac{a^2 + 4ab + 4b^2}{2a^2 + 5ab + 2b^2}$       55.  $\frac{6x^6 - 30x^4 - 36x^2}{2x^6 + 11x^4 + 12x^2}$       56.  $\frac{6t^6 + 10t^4 - 4t^2}{6t^6 - 6t^4 - 36t^2}$
57.  $\frac{12p^3q^3 - 10p^2q^2 - 8pq}{18p^4q^2 - 18p^3q - 8p^2}$       58.  $\frac{12b^4c^3 - 16b^3c^2 - 3b^2c}{8b^3c^4 - 16b^2c^3 + 6bc^2}$       59.  $\frac{x^2 + ax + xy + ay}{2x + 2a}$
60.  $\frac{ax^2 + x + a^2x + a}{3x + 3a}$       61.  $\frac{ax - 2bx + ay - 2by}{a^2 - 4b^2}$       62.  $\frac{2ax - 4ay + bx - 2by}{x^2 - 4y^2}$
63.  $\frac{x^3 + 2x + 3x^2 + 6}{2x^3 + 4x + x^2 + 2}$       64.  $\frac{3x^3 - 9x - x^2 + 3}{3x^3 + 3x - x^2 - 1}$
65.  $\frac{6x^2(3x - 4) - 2x(3x - 4)^2}{x^4}$       66.  $\frac{2(x + 2)(x^2 - 1)^3 - 6x(x^2 - 1)^2(x + 2)^2}{(x^2 - 1)^6}$
67.  $\frac{(x + 1)^3(x - 4) - 4(x + 1)(x - 4)}{4x^2 - 4x - 48}$       68.  $\frac{(2x - 3)^4(x^4 - 1) - x^3(2x - 3)(x^4 - 1)}{x^4 - x^3 + x^2 - x}$

■ For Problems 69 to 72 see Example 6.

69. Which of the following fractions are equivalent to  $2a$ ?
- a.  $\frac{2a + 4}{4}$       b.  $\frac{4a^2 - 2a}{2a - 1}$       c.  $\frac{4a^2 - 2a}{2a}$       d.  $\frac{a + 3}{2a^2 + 6a}$
70. Which of the following fractions are equivalent to  $3b$ ?
- a.  $\frac{9b^2 - 3b}{3b}$       b.  $\frac{b + 2}{3b^2 + 6b}$       c.  $\frac{3b - 9}{9}$       d.  $\frac{9b^2 - 3b}{3b - 1}$
71. Which of the following fractions are equivalent to  $-1$ ?
- a.  $\frac{2a + b}{2a - b}$       b.  $\frac{-(a + b)}{b - a}$       c.  $\frac{2a^2 - 1}{2a}$       d.  $\frac{-a^2 + 3}{a^2 + 3}$
72. Which of the following fractions are equivalent to  $-1$ ?
- a.  $\frac{2a - b}{b - 2a}$       b.  $\frac{-b^2 - 2}{b^2 + 2}$       c.  $\frac{3b^2 - 1}{3b^2 + 1}$       d.  $\frac{b - 1}{b}$

■ Solve. See Example 7.

73. River Queen Tours offers a 50-mile round-trip excursion on the Mississippi River by paddle wheel. The current in the Mississippi is 8 miles per hour.
- Write an expression for the time required for the downstream journey in terms of the speed of the paddle wheel.
  - Write an expression for the time required for the return trip upstream.
  - Write an expression for the time needed for the round trip.