56. $\dfrac{25m^6 - 15m^4 + 7}{-5m^3}$ 57. $\dfrac{9a^2b^2 + 3ab^2 + 4a^2b}{ab^2}$ 58. $\dfrac{36s^4t^5 + 24s^3t^3 - s^2t}{12st^2}$

■ *See Examples 7 and 8.*

59. $\dfrac{4y^2 + 12y + 7}{2y + 1}$ 60. $\dfrac{4t^2 - 4t - 5}{2t - 1}$

61. $\dfrac{x^3 + 2x^2 + x + 1}{x - 2}$ 62. $\dfrac{2x^3 - 3x^2 - 2x + 4}{x + 1}$

63. $\dfrac{4z^2 + 5z + 8z^4 + 3}{2z + 1}$ 64. $\dfrac{7 - 3t^3 - 23t^2 + 10t^4}{2t + 3}$

65. $\dfrac{x^4 - 1}{x - 2}$ 66. $\dfrac{y^5 + 1}{y - 1}$

B

■ *Divide. See Example 9.*

67. $\dfrac{x^3 - 3x^2 + 2x + 5}{x^2 - 2x + 7}$ 68. $\dfrac{2y^3 + 5y^2 - 3y + 2}{y^2 - y - 3}$ 69. $\dfrac{4a^4 + 3a^3 - 2a + 1}{a^2 + 3a - 1}$

70. $\dfrac{2b^4 - 3b^2 + b + 2}{b^2 + b - 3}$ 71. $\dfrac{t^4 - 3t^3 + 2t^2 - 2t + 1}{t^3 - 2t^2 + t + 2}$ 72. $\dfrac{r^4 + r^3 - 2r^2 + r + 5}{r^3 + 2r + 3}$

73. Determine k so that the polynomial $x^3 - 3x + k$ has $x - 2$ as a factor.

74. Determine k so that the polynomial $x^3 + 2x^2 + k$ has $x + 3$ as a factor.

2.3

SUMS AND DIFFERENCES

Fractions with Like Denominators

To add or subtract fractions with the same denominator, combine their numerators and use the same denominator in the sum or difference:

$$\frac{a}{c} + \frac{b}{c} = \frac{a + b}{c}$$

and

$$\frac{a}{c} - \frac{b}{c} = \frac{a - b}{c} \qquad (c \neq 0). \tag{1}$$