

Section 6.2 Focus Exercises

1. Divide each using long division.

a) $\frac{y^2 + 10y + 18}{y + 5}$

b) $\frac{3x^2 - 4x - 8}{x - 2}$

c) $(p^3 + 2p^2 - 5p - 1) \div (p + 3)$

d) $(3m^3 - 9m^2 - 14m + 8) \div (m - 4)$

2. Divide each using long division. *Be sure to write each polynomial in descending order.*

a) $(5 - 9x + 4x^2) \div (x - 1)$

b) $(3x^2 - 7 + 4x) \div (x + 2)$

c) $(6x + x^3 - 8 - 5x^2) \div (x - 4)$

d) $(14x^2 + 5x^3 - 4 - 6x) \div (x + 3)$

e) $(5x^3 + 12x^2 - x - 6) \div (5x + 2)$

f) $(x^2 - 7x + 10x^3 + 1) \div (2x - 1)$

3. Divide each using long division. *Be sure to write each polynomial in descending order; also, be sure to include any missing terms.*

a) $(2x^3 + 9x^2 + 21) \div (x + 5)$

b) $(12 - 11x^2 + 3x^3 - 9x) \div (x - 4)$

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

d) $(4x^3 - 5) \div (x + 1)$