

Homework

p. 341: 3-17 (odds)

POLYNOMIAL FUNCTIONS Decide whether the function is a polynomial function. If so, write it in standard form and state its degree, type, and leading coefficient.

3. $f(x) = 8 - x^2$ 5. $g(x) = \pi x^4 + \sqrt{6}$ 7. $h(x) = -\frac{5}{2}x^3 + 3x - 10$

DIRECT SUBSTITUTION Use direct substitution to evaluate the polynomial function for the given value of x .

9. $f(x) = 5x^3 - 2x^2 + 10x - 15; x = -1$

11. $g(x) = 4x^3 - 2x^5; x = -3$

13. $h(x) = x + \frac{1}{2}x^4 - \frac{3}{4}x^3 + 10; x = -4$

SYNTHETIC SUBSTITUTION Use synthetic substitution to evaluate the polynomial function for the given value of x .

15. $f(x) = 5x^3 - 2x^2 - 8x + 16; x = 3$

17. $g(x) = x^3 + 8x^2 - 7x + 35; x = -6$