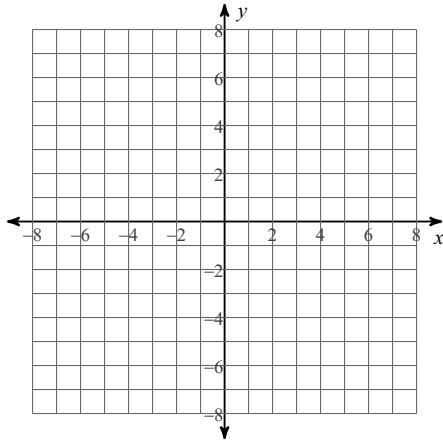


Practice - find x-int, min, max, eval, lc, deg, const, sf, multi, write given zeros

After sketching the graph, determine the zero (x-intercept) and the maximum volume for this graph which represent the volume of a box. Use technology.

1)  $f(x) = -x^3 + 2x^2 + 3$



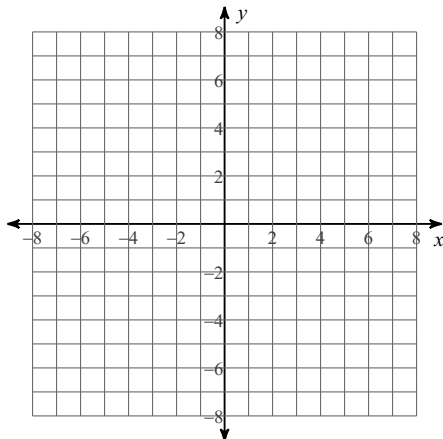
Evaluate each function at the given value.

2)  $f(n) = n^2 + n - 1$  at  $n = 2$

3)  $f(x) = x^3 - 2x^2 - 4x$  at  $x = 3$

Sketch the graph of each function and estimate the minimum(s) using technology.

4)  $f(x) = x^4 - 4x^2 + x + 5$



**Identify the degree, leading coefficient, and constant value of each of the following polynomials**

5)  $f(x) = x^2 - 4x - 2$

6)  $f(x) = x^4 - x^2 - 42$

7)  $f(x) = x^3 - 27$

**Find all values of that make the equation true.**

8)  $(x - 2)(x + 2)(x - 3)(x + 3) = 0$

9)  $(x + 5)(x - 5) = 0$

**Rewrite the following in standard form.**

10)  $n^2 - 8n^3 + 4n$

11)  $3 + v^4 + 9v^2 + 6v + 10v^3$

**Multiply and write your final answer in standard form.**

12)  $(3r - 3)(2r + 5)$

13)  $(5x + 1)(5x + 2)$

**Find the x-intercepts of the following polynomials.**

14)  $(x - 2)(x + 2) = 0$

15)  $(x + 4)(x - 5) = 0$

**Write a polynomial function that has the given zeros.**

16) 2, -3, -5

17) -4, 4, 0