

Applications of Polynomial Functions

We can evaluate a polynomial function for a given value of x when it is given as a table of values, graph or equation. The y -intercept of any function is determined when $x = 0$.

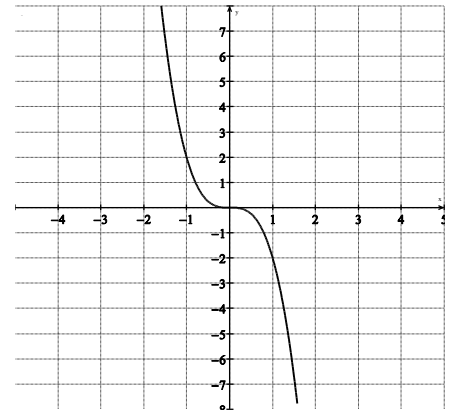
Example 1 Determine the value of each function when $x = -1$.

a) $y = x^4 - 2x^3 + x - 3$

b)

x	y
-2	-24
-1	-3
0	0
1	3
2	24

c)



Example 2

a) Determine the function that models the volume of a cylinder whose height is double its radius.

b) Determine the volume when the radius is 5 cm.