

Polynomial Graphs

End behavior:

Positive leading coefficient Even Degree	Negative leading coefficient Even Degree
Positive leading coefficient Odd Degree	Negative leading coefficient Odd Degree

Middle portion of the graph:

A polynomial graph has _____ local minimum/maximum points.

The constant at the end of an equation (c – value) gives us the _____.

A polynomial equation in factored form tells us the _____ of the graph.

Even powered factor	Odd powered factor

Sketch a graph of the following equations:

1. $f(x) = x^3 + 6$
2. $f(x) = -2x^4 - 1$
3. $f(x) = -4x^5 + 3$
4. $f(x) = (x - 2)(x + 3)(x + 5)$
5. $f(x) = (x - 2)^2(x + 3)(x + 5)$
6. $f(x) = (x - 2)^2(x + 3)^3(x + 5)$
7. $f(x) = (x - 2)^2(x + 3)^3$