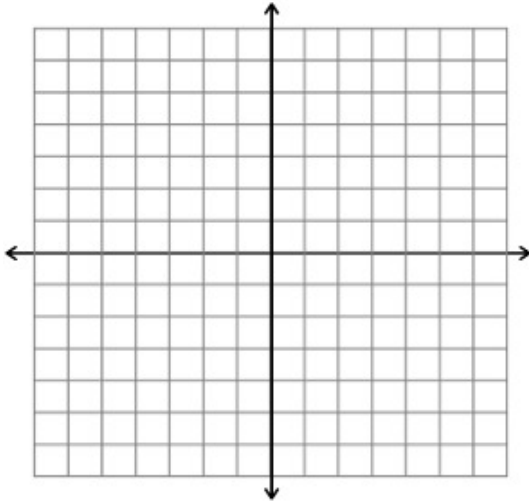


Worksheet 57 - Polynomials

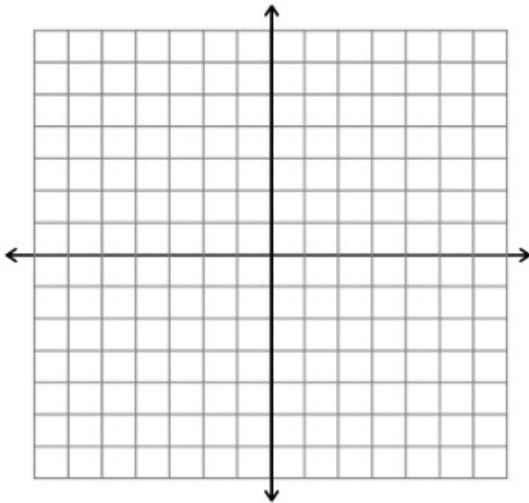
For each polynomial function given below, do the following:

- (a) Identify the leading term and determine the graph's end-behavior.
- (b) Find the zeros and identify their multiplicities.
- (c) Find the polynomial's y -intercept.
- (d) Sketch the graph clearly showing the end-behavior, zeros, and y -intercept.

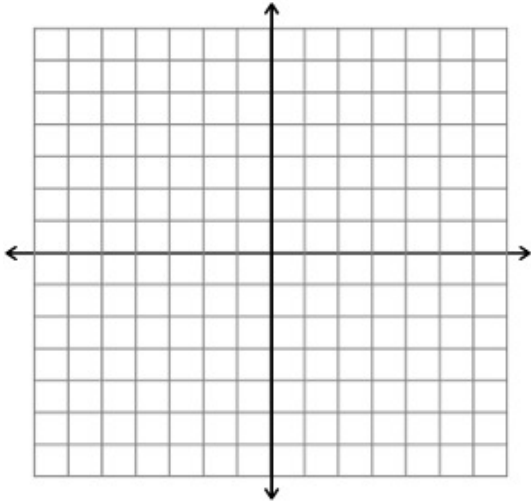
1. $f(x) = (x - 4)(x - 1)(x + 3)$



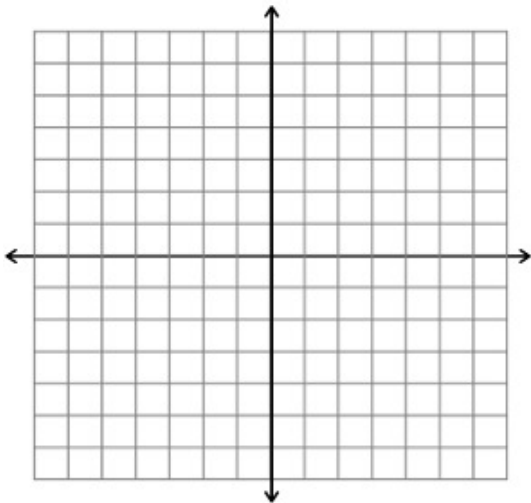
2. $g(x) = (-1 - x)(x - 2)^2(4 - x)$



3. $h(x) = -x^3(2x - 3)$



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



5. Write a possible equation for each polynomial $f(x)$, $g(x)$, and $h(x)$, whose graphs are shown below:

