## Math 1 - Worksheet 3

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Name:		

For each of the following polynomials, complete the following steps:

- (i) Factor the polynomial
- (ii) Find the zeros of the polynomial
- (iii) Determine the long run behavior

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

2. 
$$g(x) = -2x^4 - x^3 + 3x^2$$

3. 
$$h(x) = -x^3 - 5x$$

4. 
$$k(x) = 2x^4 + x^2 - 3$$

Using your work on the previous page, match the functions with A-D in the graph below.

1. \_\_\_\_ 
$$f(x) = x^3 - 4x$$

2. 
$$g(x) = -2x^4 - x^3 + 3x^2$$

4. 
$$k(x) = 2x^4 + x^2 - 3$$

