Polynomial End Behavior
Demonstration Activity

1) Open the Polynomial End Behavior Demonstration located at
http://demonstrations.wolfram.com/EndBehaviorOfPolynomialFunctions/

2) First get familiar with the various options. Adjust the sliders for the range and coefficients. You can animate the demonstration by clicking on the squares with a plus sign and pressing play.

3) Sketch the graphs of:

a) $34x^5 - 12x^4 + 3x^2 - 2x + 41$

b) $2x^5 + 4x^3 - 21x^2 - 10x$

c) $-13x^5 + 17x$

d) $-98x^5 - 98x^4 - 98x^3 - 98x^2 - 98x - 98$

4) Animate the sliders for the range and all of the coefficients.

a) In your own words, describe what this demonstration "proves".

b) Write down the 4 different End Behaviors possible and the characteristics of the polynomials that generate these end behaviors.