Cubic functions and beyond

Remember the Box Problem? We found that we could find the volume of the box as a function of the "cut out" length using:

$$f(x) = x(11-2x)(8.5-2x) = 4x^3 - 39x^2 + 93.5x$$

1. Using the knowledge gained from our investigations of quadratic functions, make conjectures about patterns and rates of change of cubic functions.

2. Use a cubic function to test your theories. You might choose a simple function such as $f(x) = x^3$, you may wish to explore the function generated by the Box Problem, or maybe you want to make up your own. Record your investigation, draw conclusions and be prepared to share with the class.

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