

## End Behavior

Graph  $x^3 - 6x^2 + 5x + 4$

What do the ends of the graph do?  
Which way do they point?

Graph  $2x^2 + 7x + 5$

What do the ends of the graph do?  
Which way do they point?

Connection between odd vs. even degree.

What if we make them negative?

	<u>Odd Degree</u>	<u>Even Degree</u>
+ Leading Coefficient	As $x \rightarrow +\infty$ $f(x) \rightarrow +\infty$	As $x \rightarrow +\infty$ $f(x) \rightarrow +\infty$
	As $x \rightarrow -\infty$ $f(x) \rightarrow -\infty$	As $x \rightarrow -\infty$ $f(x) \rightarrow +\infty$
- Leading Coefficient	As $x \rightarrow +\infty$ $f(x) \rightarrow -\infty$	As $x \rightarrow +\infty$ $f(x) \rightarrow -\infty$
	As $x \rightarrow -\infty$ $f(x) \rightarrow +\infty$	As $x \rightarrow -\infty$ $f(x) \rightarrow -\infty$

## Max/Min

• Use Calculator

2nd → Trace

Example :  $x^3 - 6x^2 + 5x + 4$

Assignment

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#2-9, 12, 13, 15-22, 27-30