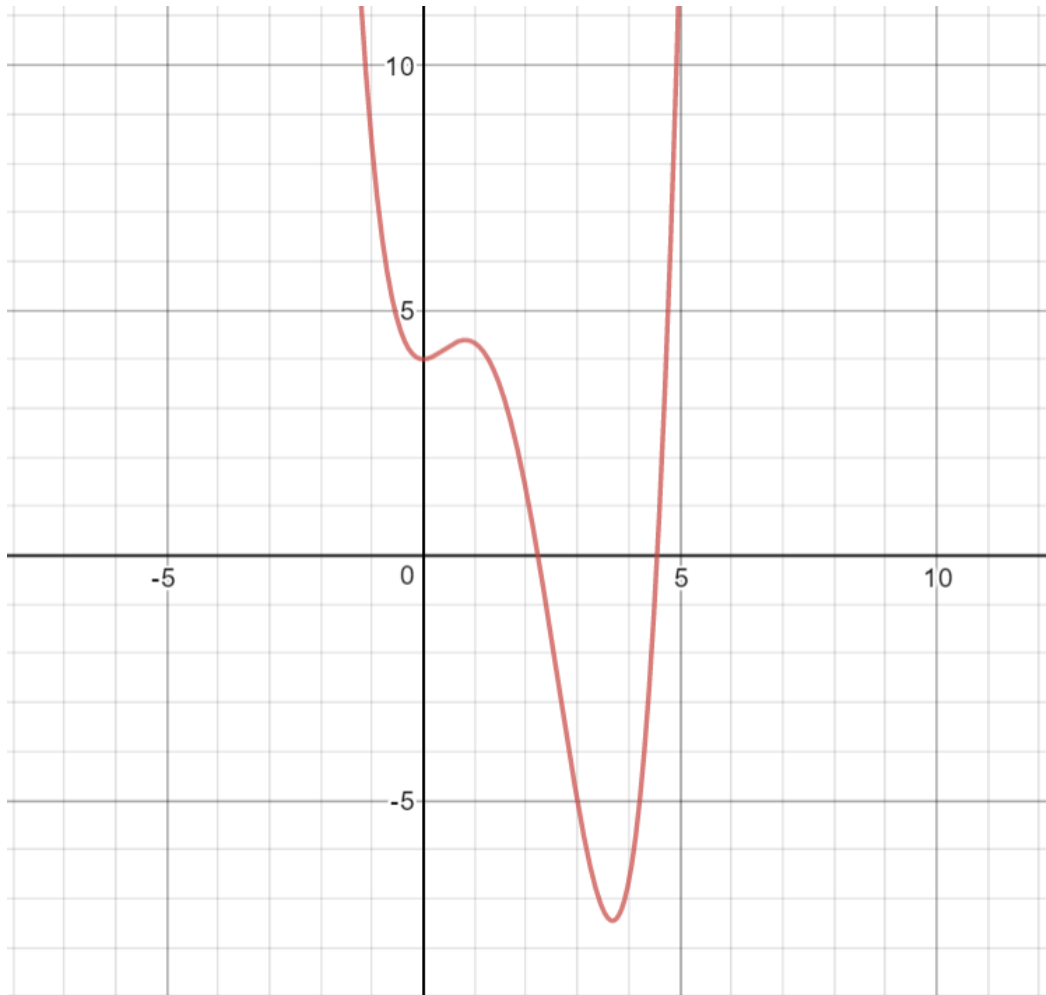


Graphing Polynomials

Graph $f(x) = \frac{1}{3}x^4 - 2x^3 + 2x^2 + 4$ and identify its attributes.



Zeros: $(2.232, 0)$ and $(4.556, 0)$

Increasing: $(0, .814) \cup (3.686, \infty)$

Decreasing: $(-\infty, 0) \cup (.814, 3.686)$

Relative maximum(s): $(.814, 4.393)$

Relative minimum(s): $(3.686, -7.455)$

End Behavior: As $x \rightarrow \infty$, $f(x) \rightarrow \infty$
As $x \rightarrow -\infty$, $f(x) \rightarrow \infty$

Domain: $(-\infty, \infty)$

Range: $(-7.455, \infty)$

To find zeros:

Set $y_2 = 0$ and find the intersection(s) on the graph using 2nd → trace → 5: Intersection.

To find the relative minimums: 2nd → trace → 3: Minimum. Move the cursor to the left of the minimum and hit enter. Move it to the right and hit enter twice.

To find the relative maximums: 2nd → trace → 4: Maximum. Move the cursor to the left and right of the maximum.