

**Ex :** Find the relative maximum and relative minimum of .

Relative Maximum: \_\_\_\_\_\_\_ Relative Minimum: \_\_\_\_\_\_\_

**Points of Inflection**

**Def:** A point at which the function of the graph changes \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

A cubic polynomial has \_\_\_\_\_ inflection point. A 4th degree polynomial has \_\_\_\_ inflection points. Quadratic and linear functions have \_\_\_\_ inflection points.

**End Behavior**

1. If the degree of a polynomial is \_\_\_\_\_\_\_\_\_, then the arms of the graph are either both \_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_.
2. If the degree is \_\_\_\_\_\_\_\_, then one arm of the graph is \_\_\_\_\_ and the other is \_\_\_\_\_\_\_.
3. If the leading coefficient is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, the right arm of the graph is \_\_\_\_\_\_\_\_.
4. If the leading coefficient is \_\_\_\_\_\_\_\_\_\_\_\_\_\_, the right arm of the graph is \_\_\_\_\_\_\_\_\_\_\_.

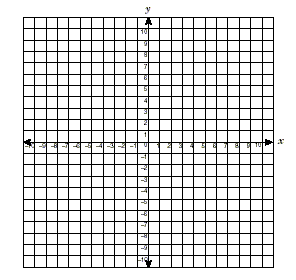


**Increasing/Decreasing**

**Ex** : Describe the intervals over which the graph is increasing and decreasing for .

Intervals: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Practice Problem: (Putting it all together! ☺)**

Relative Max: \_\_\_\_\_\_\_\_\_\_\_\_\_

Relative Min: \_\_\_\_\_\_\_\_\_\_\_\_\_\_

Inc/Dec Intervals: \_\_\_\_\_\_\_\_\_\_\_\_\_\_

Zero(s): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

End behavior: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_