1. Consider the polynomial function below.

* Multiple choice: describe the end behavior.
  1. Down-down: when then and when then .
  2. Up-down: when then and when then .
  3. Down-up: when then and when then .
  4. Up-up: when then and when then .

1. Consider the polynomial function below.

* How many roots, including complex roots and counting multiplicity, does the polynomial have?
* Or, in other words, based on the degree of the polynomial, what is the most number of possible real roots?

1. **Draw** the polynomial function shown in factored and expanded forms. Be sure to indicate the roots, where the function is positive or negative, and end behavior.
2. Factor the polynomial function to determine the roots.