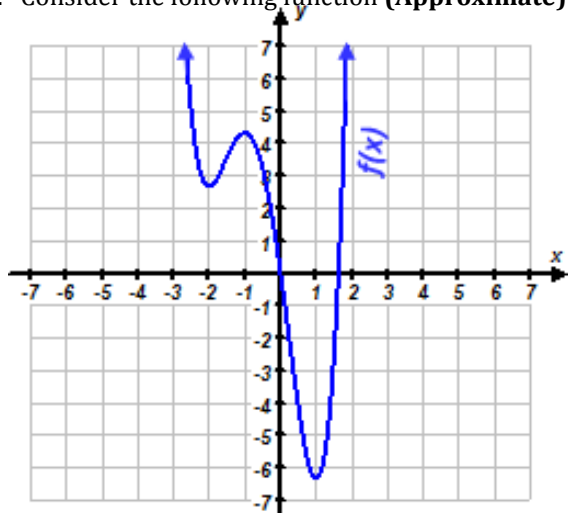


Characteristics of Polynomial Functions

Name: _____

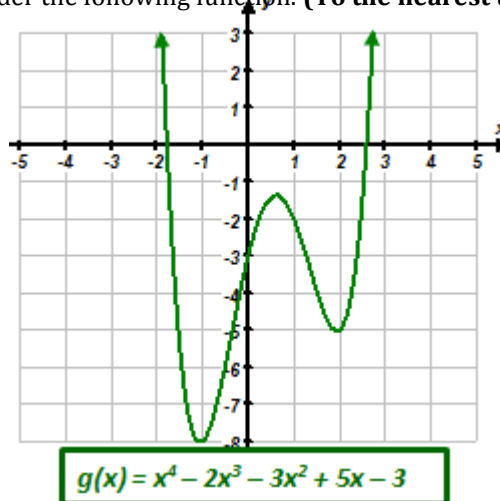
1. Describe the Domain, Range, Intervals of Increase/Decrease, Intervals of Positive/Negative, End Behavior, Intercepts.

A. Consider the following function (**Approximate**)



- i) Local **Minimums**: _____
- ii) Local **Maximums**: _____
- iii) Describe the **Domain**: _____
- iv) Describe the **Range**: _____
- v) Describe **Intervals of Increase**: _____
- vi) Describe **Intervals of Decrease**: _____
- vii) As $x \rightarrow -\infty$, determine $f(x) \rightarrow$ _____
- viii) As $x \rightarrow \infty$, determine $f(x) \rightarrow$ _____
- ix) Determine the **x-intercept**: _____
- x) Determine the **y-intercept**: _____
- xi) Describe **Intervals of Positive**: _____
- xii) Describe **Intervals of Negative**: _____

B. Consider the following function. (**To the nearest tenth**)



$g(x) = x^4 - 2x^3 - 3x^2 + 5x - 3$

- i) Local **Minimums**: _____
- ii) Local **Maximums**: _____
- iii) Describe the **Domain**: _____
- iv) Describe the **Range**: _____
- v) Describe **Intervals of Increase**: _____
- vi) Describe **Intervals of Decrease**: _____
- vii) As x **decreases**, determine $f(x) \rightarrow$ _____
- viii) As x **increases**, determine $f(x) \rightarrow$ _____
- ix) Determine the **x-intercept**: _____
- x) Determine the **y-intercept**: _____
- xi) Describe **Intervals of Positive**: _____
- xii) Describe **Intervals of Negative**: _____