Unit 2 Polynomials: Review – Characteristics of Polynomials

Identify the characteristics for the following polynomials:

1. **$f(x)= -x^3 – 2x^4 + x + 3$**

   Standard form _____ Leading Coefficient _____ Degree _____

   # of Zeros _____ Classify by degree _____ Classify by # of terms _____

   End Behavior: as $x \to +\infty$, $f(x) \to$ _____ as $x \to -\infty$, $f(x) \to$ _____ # of Turns _____

2. **$f(x)= 3x - 5 + x^2$**

   Standard form _____ Leading Coefficient _____ Degree _____

   # of Zeros _____ Classify by degree _____ Classify by # of terms _____

   End Behavior: as $x \to +\infty$, $f(x) \to$ _____ as $x \to -\infty$, $f(x) \to$ _____ # of Turns _____

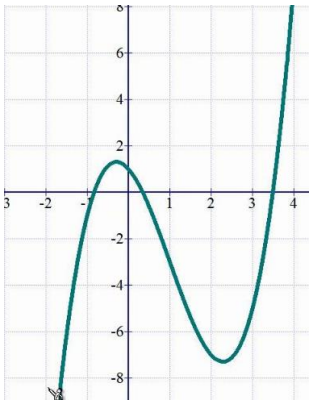
3. **$f(x)= 4x$**

   Standard form _____ Leading Coefficient _____ Degree _____

   # of Zeros _____ Classify by degree _____ Classify by # of terms _____

   End Behavior: as $x \to +\infty$, $f(x) \to$ _____ as $x \to -\infty$, $f(x) \to$ _____ # of Turns _____

4.



Domain _____ Absolute Maximum _____

Range _____ Absolute Minimum _____

Zero(s) _____ Int. of Increasing _____

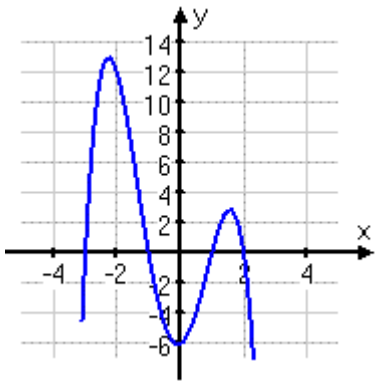
Y-intercept _____ Int. of Decreasing _____

# of Extrema _____ End Behavior:

Relative Maximum _____ as $x \to +\infty$, $f(x) \to$ _____

Relative Minimum _____ as $x \to -\infty$, $f(x) \to$ _____

5.



Domain _____ Absolute Maximum _____

Range _____ Absolute Minimum _____

Zero(s) _____ Int. of Increasing _____

Y-intercept _____ Int. of Decreasing _____

# of Extrema _____ End Behavior:

Relative Maximum _____ as $x \to +\infty$, $f(x) \to$ _____

Relative Minimum _____ as $x \to -\infty$, $f(x) \to$ _____