**Unit 2 Polynomials: Review – Characteristics of Polynomials**

Identify the characteristics for the following polynomials:

1. **f(x)= -x3 – 2x4 + x + 3**

Standard form \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Leading Coefficient \_\_\_\_\_\_\_\_ Degree \_\_\_\_\_\_\_\_

# of Zeros \_\_\_\_\_\_ Classify by degree \_\_\_\_\_\_\_\_\_\_\_\_\_\_ Classify by # of terms \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

End Behavior: as x → +∞, f(x) → \_\_\_\_\_\_\_\_\_\_ as x → - ∞, f(x) → \_\_\_\_\_\_\_\_\_\_ # of Turns \_\_\_\_\_\_

1. **f(x)= 3x - 5+ x2**

Standard form \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Leading Coefficient \_\_\_\_\_\_\_\_ Degree \_\_\_\_\_\_\_\_

# of Zeros \_\_\_\_\_\_ Classify by degree \_\_\_\_\_\_\_\_\_\_\_\_\_\_ Classify by # of terms \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

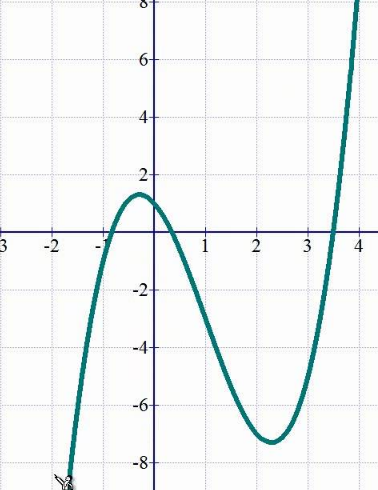
End Behavior: as x → +∞, f(x) → \_\_\_\_\_\_\_\_\_\_ as x → - ∞, f(x) → \_\_\_\_\_\_\_\_\_\_ # of Turns \_\_\_\_\_\_

1. **f(x)= 4x**

Standard form \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Leading Coefficient \_\_\_\_\_\_\_\_ Degree \_\_\_\_\_\_\_\_

# of Zeros \_\_\_\_\_\_ Classify by degree \_\_\_\_\_\_\_\_\_\_\_\_\_\_ Classify by # of terms \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

End Behavior: as x → +∞, f(x) → \_\_\_\_\_\_\_\_\_\_ as x → - ∞, f(x) → \_\_\_\_\_\_\_\_\_\_ # of Turns \_\_\_\_\_\_

4.

Domain \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Range \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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

Y-intercept \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# of Extrema \_\_\_\_\_\_\_\_\_\_\_\_\_

Relative Maximum \_\_\_\_\_\_\_\_\_

Relative Minimum \_\_\_\_\_\_\_\_\_\_\_

Absolute Maximum \_\_\_\_\_\_\_\_\_\_\_

Absolute Minimum \_\_\_\_\_\_\_\_\_\_\_\_

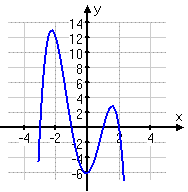
Int. of Increasing \_\_\_\_\_\_\_\_\_\_\_\_\_\_

Int. of Decreasing \_\_\_\_\_\_\_\_\_\_\_\_

End Behavior:

as x → +∞, f(x) → \_\_\_\_\_\_\_\_

as x → - ∞, f(x) → \_\_\_\_\_\_\_\_

5.

Domain \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Range \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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

Y-intercept \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# of Extrema \_\_\_\_\_\_\_\_\_\_\_\_\_

Relative Maximum \_\_\_\_\_\_\_\_\_

Relative Minimum \_\_\_\_\_\_\_\_\_\_\_

Absolute Maximum \_\_\_\_\_\_\_\_\_\_\_

Absolute Minimum \_\_\_\_\_\_\_\_\_\_\_\_

Int. of Increasing \_\_\_\_\_\_\_\_\_\_\_\_\_\_

Int. of Decreasing \_\_\_\_\_\_\_\_\_\_\_\_

End Behavior:

as x → +∞, f(x) → \_\_\_\_\_\_\_\_

as x → - ∞, f(x) → \_\_\_\_\_\_\_\_