GPS Advanced Algebra Unit 4

**Objective**: To identify end behavior of polynomial functions algebraically and graphically.

|  |  |  |  |
| --- | --- | --- | --- |
| **Degree of Polynomial**  | **Leading Coefficient**  | **Graphically**  | **Description**  |
| **Even** | **Positive** |  |  **as**  |
| **Even** | **Negative** |  |  **as**  |
| **Odd** | **Positive** |  |  **as**  **as**  |
| **Odd** | **Negative** |  |  **as**  **as**  |

**Describe the degree and leading coefficient of the polynomial function. Then describe the end behavior of the graph.**

1) 

The degree is \_\_\_\_\_\_\_\_\_ and the leading coefficient is \_\_\_\_\_\_\_\_\_.

**\_\_\_\_\_\_ as **

**\_\_\_\_\_\_ as **

2) 

The degree is \_\_\_\_\_\_\_\_\_ and the leading coefficient is \_\_\_\_\_\_\_\_\_.

**\_\_\_\_\_\_ as **

**\_\_\_\_\_\_ as **

3) 

The degree is \_\_\_\_\_\_\_\_\_ and the leading coefficient is \_\_\_\_\_\_\_\_\_.

**\_\_\_\_\_\_ as **

**\_\_\_\_\_\_ as **

4) 

The degree is \_\_\_\_\_\_\_\_\_ and the leading coefficient is \_\_\_\_\_\_\_\_\_.

**\_\_\_\_\_\_ as **

**\_\_\_\_\_\_ as **

**Describe the end behavior of the graph. Then describe the degree and leading coefficient of the polynomial function.**

5)



**\_\_\_\_\_\_ as **

**\_\_\_\_\_\_ as **

The degree is \_\_\_\_\_\_\_\_\_ and the leading coefficient is \_\_\_\_\_\_\_\_\_.

6)



**\_\_\_\_\_\_ as **

**\_\_\_\_\_\_ as **

The degree is \_\_\_\_\_\_\_\_\_ and the leading coefficient is \_\_\_\_\_\_\_\_\_.

7)



**\_\_\_\_\_\_ as **

**\_\_\_\_\_\_ as **

The degree is \_\_\_\_\_\_\_\_\_ and the leading coefficient is \_\_\_\_\_\_\_\_\_.

8)



**\_\_\_\_\_\_ as **

**\_\_\_\_\_\_ as **

The degree is \_\_\_\_\_\_\_\_\_ and the leading coefficient is \_\_\_\_\_\_\_\_.

**Use what you know about end behavior to match the polynomial function with its graph.**

9) 

10) 

11) 

