

MODULE 4 - POWER FUNCTIONS AND POLYNOMIAL FUNCTIONS

LEARNING OBJECTIVES

In this section, you will:

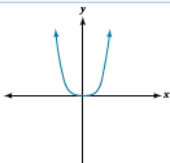
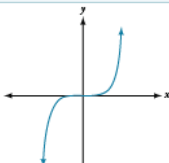
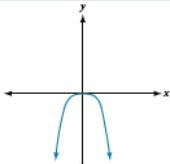
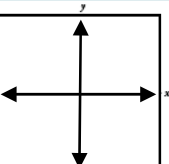
- Identify power functions.
- Identify end behavior of power functions.
- Identify polynomial functions.
- Identify the degree and leading coefficients of polynomial functions.

IDENTIFYING POWER FUNCTIONS

- State the definition of power function.

IDENTIFYING END BEHAVIOR OF POWER FUNCTIONS

- State the definition of end behavior and complete the table below using Figure 4.

| | <input type="text"/> | Odd power |
|---|--|--|
| <input type="text"/> $k > 0$ |  <p>$x \rightarrow -\infty, f(x) \rightarrow \infty$ and $x \rightarrow \infty, f(x) \rightarrow \infty$</p> |  <p>$x \rightarrow -\infty, f(x) \rightarrow -\infty$</p> <input type="text"/> |
| Negative constant <input type="text"/> |  <p><input type="text"/> and $x \rightarrow \infty, f(x) \rightarrow -\infty$</p> |  <p>$x \rightarrow -\infty, f(x) \rightarrow \infty$ and $x \rightarrow \infty, f(x) \rightarrow -\infty$</p> |

IDENTIFYING POLYNOMIAL FUNCTIONS

- State the definition of polynomial functions

IDENTIFYING THE DEGREE AND LEADING COEFFICIENT OF A POLYNOMIAL FUNCTION

- State the definition of terminology of polynomial functions.
- State both of the definitions of intercepts and turning points of polynomial functions.