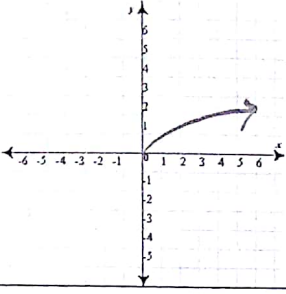
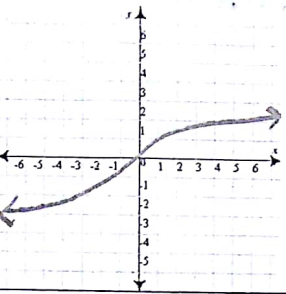
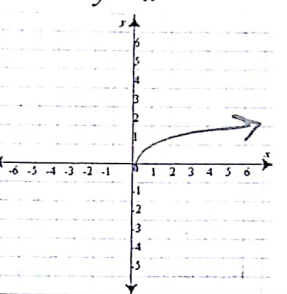
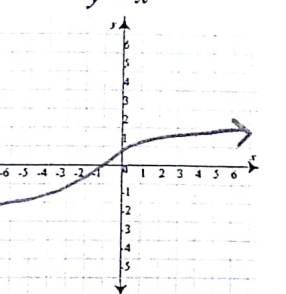


Power Functions

$y = K \cdot x^p$ K and p are constants

Name: Key

Sketch a graph of each of the following power functions with your calculator. Answer the following questions.

| | | | |
|---|--|---|--|
| $y = x^{\frac{1}{2}}$  | $y = x^{\frac{1}{3}}$  | $y = x^{\frac{1}{4}}$  | $y = x^{\frac{1}{5}}$  |
| <p>Even, Odd, or Neither? <u>neither</u></p> <p>$\lim_{x \rightarrow \infty} f(x) = \infty$</p> <p>$\lim_{x \rightarrow -\infty} f(x) = \text{DNE}$</p> | <p>Even, Odd, or Neither? <u>odd</u></p> <p>$\lim_{x \rightarrow \infty} f(x) = \infty$</p> <p>$\lim_{x \rightarrow -\infty} f(x) = -\infty$</p> | <p>Even, Odd, or Neither? <u>neither</u></p> <p>$\lim_{x \rightarrow \infty} f(x) = \infty$</p> <p>$\lim_{x \rightarrow -\infty} f(x) = \text{DNE}$</p> | <p>Even, Odd, or Neither? <u>odd</u></p> <p>$\lim_{x \rightarrow \infty} f(x) = \infty$</p> <p>$\lim_{x \rightarrow -\infty} f(x) = -\infty$</p> |
| <p>How are the functions above similar/different?</p> <p>$y = x^{\text{even}}$ \rightarrow $y = x^{\text{odd}}$ \leftarrow</p> | | | |