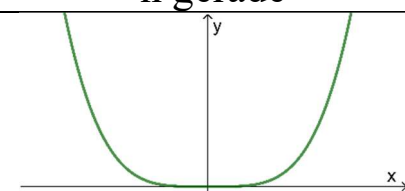
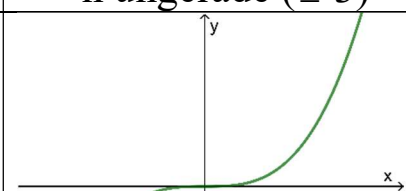
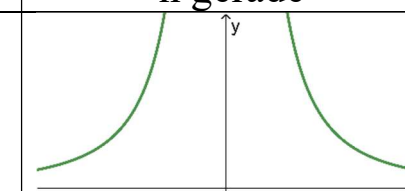
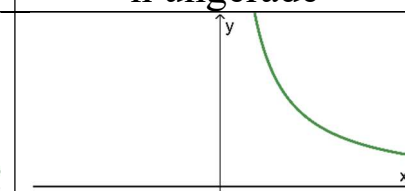
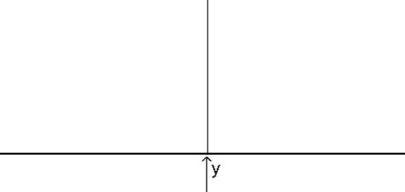
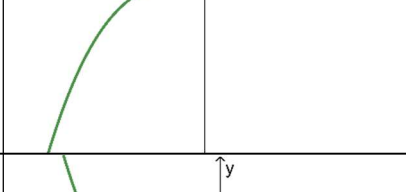
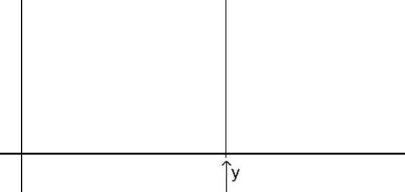
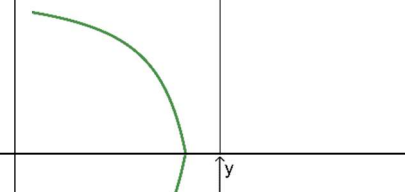
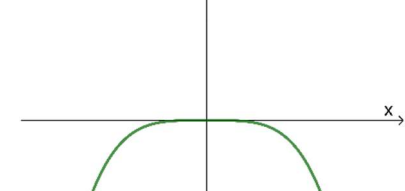
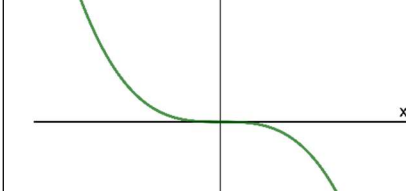

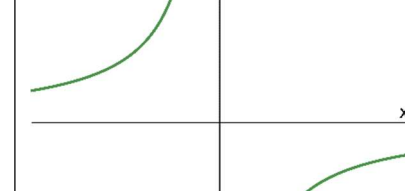


Potenzfunktionen und -gleichungen

(mit ganzzahligen Exponenten)

	$n > 0$		$n < 0$	
	n gerade	n ungerade (≥ 3)	n gerade	n ungerade
Graph				
$a > 0$				
$a < 0$				
Name	Parabeln n. Ordnung		Hyperbeln n. Ordnung	
Symmetrie				
Globalverhalten	$a > 0:$ $\lim_{x \rightarrow -\infty} f(x) =$ $\lim_{x \rightarrow +\infty} f(x) =$ $a < 0:$ $\lim_{x \rightarrow -\infty} f(x) =$ $\lim_{x \rightarrow +\infty} f(x) =$	$a > 0:$ $\lim_{x \rightarrow -\infty} f(x) =$ $\lim_{x \rightarrow +\infty} f(x) =$ $a < 0:$ $\lim_{x \rightarrow -\infty} f(x) =$ $\lim_{x \rightarrow +\infty} f(x) =$	$\lim_{x \rightarrow -\infty} f(x) =$; $\lim_{x \rightarrow +\infty} f(x) =$ $\lim_{x \rightarrow 0} f(x) =$	

Satz: Der Graph einer Potenzfunktion ist symmetrisch $\left\{ \begin{array}{l} \text{zur y-Achse} \\ \text{zum Ursprung} \end{array} \right\}$, wenn der Exponent $\left\{ \quad \right\}$ ist.

Beispiele für Potenzgleichungen:

1) $x^4 - 16 = 0$

2) $-2x^3 = 16$

Gleichungen der Form $x^n = c$ ($n \in \mathbb{N}$) werden durch Ziehen der n-ten Wurzel gelöst.

n gerade: Lsg. () für alle $c > 0$

n ungerade: Lsg. für alle $c \in \mathbb{R}$