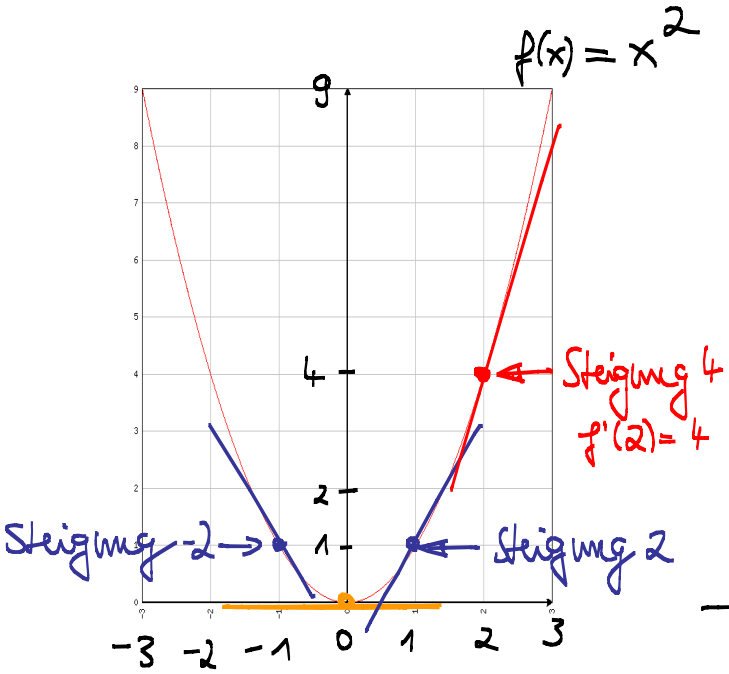
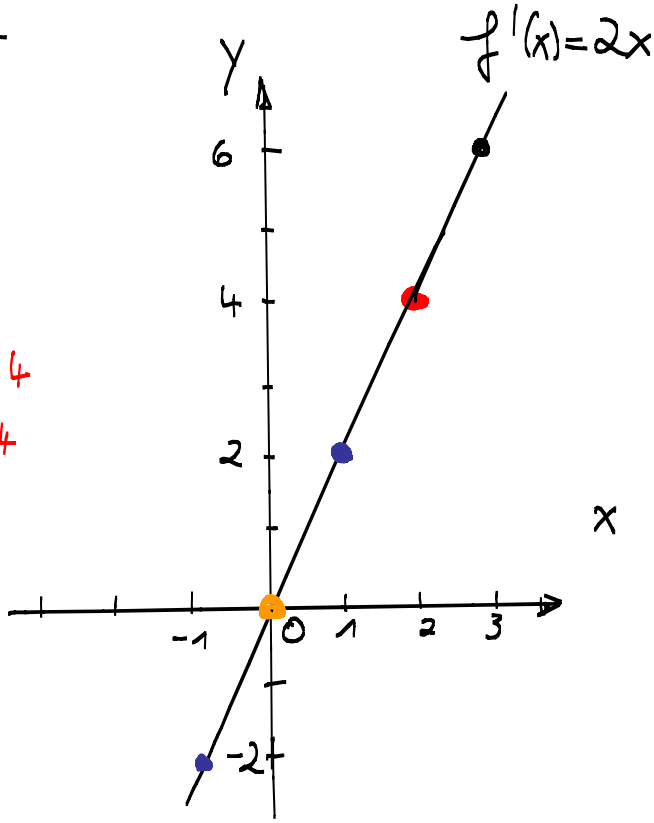
Potenzfunktionen

$f(x) = x^2$

$f'(x) = 2x$





$f(x) = 1$, $f'(x) = 0$ $\quad n = 0$

$f(x) = x$, $f'(x) = 1$ $\quad n = 1$

$f(x) = x^2$, $f'(x) = 2x$ $\quad n = 2$

$f(x) = x^3$, $f'(x) = 3x^2$ $\quad n = 3$

$f(x) = x^4$, $f'(x) = 4x^3$ $\quad n = 4$

usw.

$f(x) = x^n$, $f'(x) = n \cdot x^{n-1}$ gilt für alle $n \in \mathbb{R}$