

Ableitungen
Potenzregel: $f(x)=x^n \rightarrow f'(x)=n \cdot x^{n-1}$

Weitere Regeln, die man öfter braucht: $\frac{a}{b^c} = a \cdot b^{-c}$ und $\sqrt[a]{x^b} = x^{\frac{b}{a}}$

f(x) =	f(x) =	f'(x) =	f'(x) =
$f(x) = 3$			
$f(x) = x$			
$f(x) = 2x$			
$f(x) = 2x + 2$			
$f(x) = x^2$			
$f(x) = 3x^2$			
$f(x) = 3x^2 + 3$			
$f(x) = 3x^2 + 2x$			
$f(x) = \frac{1}{2}x^2 - 5x + 2$			
$f(x) = x^{-2}$			
$f(x) = \frac{1}{x^2}$			
$f(x) = \frac{3}{x^3}$			
$f(x) = \frac{2}{x^3} + 2x^2$			
$f(x) = \sqrt{x}$			
$f(x) = \sqrt[3]{x^6}$			
$f(x) = \sqrt[3]{x^2}$			
$f(x) = \frac{1}{\sqrt{x}}$			
$f(x) = \frac{2}{\sqrt{x}}$			
$f(x) = \frac{2}{\sqrt{x^2}}$			
$f(x) = \frac{1}{\sqrt[3]{x^2}}$			

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$f(x) =$	$f(x) =$	$f'(x) =$	$f'(x) =$
$f(x) = 3$	_____	$f'(x) = 0$	
$f(x) = x$	_____	$f'(x) = 1$	
$f(x) = 2x$	_____	$f'(x) = 2$	
$f(x) = 2x + 2$	_____	$f'(x) = 2 + 0 = 2$	
$f(x) = x^2$	_____	$f'(x) = 2x$	
$f(x) = 3x^2$	_____	$f'(x) = 6x$	
$f(x) = 3x^2 + 3$	_____	$f'(x) = 6x$	
$f(x) = 3x^2 + 2x$	_____	$f'(x) = 6x + 2$	
$f(x) = \frac{1}{2}x^2 - 5x + 2$	_____	$f'(x) = x - 5$	
$f(x) = x^{-2}$	_____	$f'(x) = -2x^{-3}$	$f'(x) = -\frac{2}{x^3}$
$f(x) = \frac{1}{x^2}$	$f(x) = x^{-2}$	$f'(x) = -2x^{-3}$	$f'(x) = -\frac{2}{x^3}$
$f(x) = \frac{3}{x^3}$	$f(x) = 3x^{-3}$	$f'(x) = -9x^{-4}$	$f'(x) = -\frac{9}{x^4}$
$f(x) = \frac{2}{x^3} + 2x^2$	$f(x) = 2x^{-3} + 2x^2$	$f'(x) = -6x^{-4} + 4x$	$f'(x) = -\frac{6}{x^4} + 4x$
$f(x) = \sqrt{x}$	$f(x) = x^{\frac{1}{2}}$	$f'(x) = \frac{1}{2}x^{-\frac{1}{2}}$	$f'(x) = \frac{1}{2\sqrt{x}}$
$f(x) = \sqrt[3]{x^6}$	$f(x) = x^{\frac{6}{3}} = x^2$	$f'(x) = 2x$	
$f(x) = \sqrt[3]{x^2}$	$f(x) = x^{\frac{2}{3}}$	$f'(x) = \frac{2}{3}x^{-\frac{1}{3}}$	$f'(x) = \frac{2}{3x^{\frac{1}{3}}} = \frac{2}{3\sqrt[3]{x}}$
$f(x) = \frac{1}{\sqrt{x}}$	$f(x) = x^{-\frac{1}{2}}$	$f'(x) = -\frac{1}{2}x^{-\frac{3}{2}}$	$f'(x) = \frac{1}{2\sqrt{x^3}}$
$f(x) = \frac{2}{\sqrt{x}}$	$f(x) = 2x^{-\frac{1}{2}}$	$f'(x) = -x^{-\frac{3}{2}}$	$f'(x) = -x^{-\frac{3}{2}} = -\frac{1}{\sqrt{x^3}}$
$f(x) = \frac{2}{\sqrt{x^2}}$	$f(x) = 2x^{-1}$	$f'(x) = -2x^{-2}$	$f'(x) = -\frac{2}{x^2}$
$f(x) = \frac{1}{\sqrt[3]{x^2}}$	$f(x) = x^{-\frac{2}{3}}$	$f'(x) = -\frac{2}{3}x^{-\frac{5}{3}}$	$f'(x) = -\frac{2}{3x^{\frac{5}{3}}} = -\frac{2}{3\sqrt[3]{x^5}}$