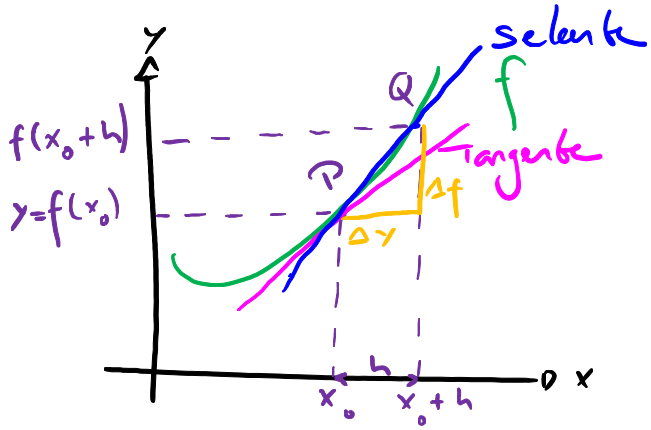
Repetition Semester 1



mittlere Steigung $= \frac{\Delta f}{\Delta y} = \frac{f(x_0+h)-f(x_0)}{h}$

$m_t = \frac{df}{dx} = \lim_{h \to 0} \frac{f(x_0+h)-f(x_0)}{h}$

$f(x) = \sqrt{x} \quad f'(x) = \frac{1}{2} x^{-\frac{1}{2}} = \frac{1}{2\sqrt{x}}$

$f(x) = \sqrt{3x^2 - 4x}$

$f'(x) = \underbrace{\frac{1}{2\sqrt{3x^2-4x}}}_{\text{äussere Ableitung}} \cdot \underbrace{(6x-4)}_{\text{innere Ableitung}}$

$g(x) = \sin(x^2)$

$g'(x) = \underbrace{\cos(x^2)}_{\text{äussere Ableitung}} \cdot \underbrace{2x}_{\text{innere Ableitung}}$