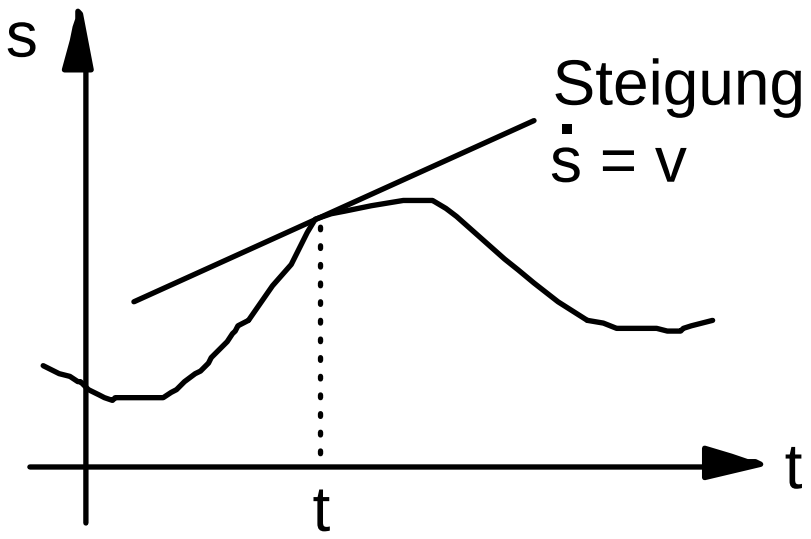
Ort $\vec{s}$, Geschwindigkeit $\vec{v}$, Beschleunigung $\vec{a}$

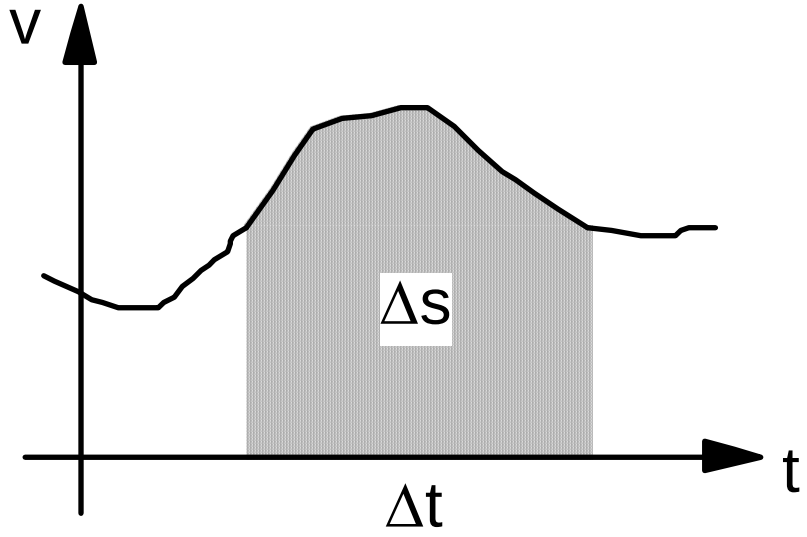
$\vec{s}$ 1-dim.: $\vec{s} = \begin{pmatrix} s \\ 0 \\ 0 \end{pmatrix}$

$\vec{v} := \dot{\vec{s}}$ 1-dim.: $\vec{v} = \begin{pmatrix} v \\ 0 \\ 0 \end{pmatrix} \quad \Longrightarrow \quad v = \dot{s}$

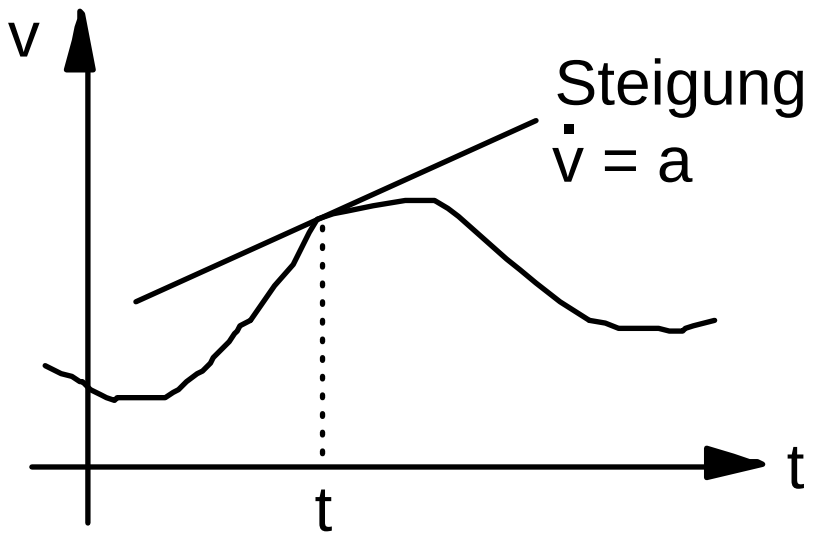
$\vec{a} := \dot{\vec{v}}$ 1-dim.: $\vec{a} = \begin{pmatrix} a \\ 0 \\ 0 \end{pmatrix} \quad \Longrightarrow \quad a = \dot{v}$

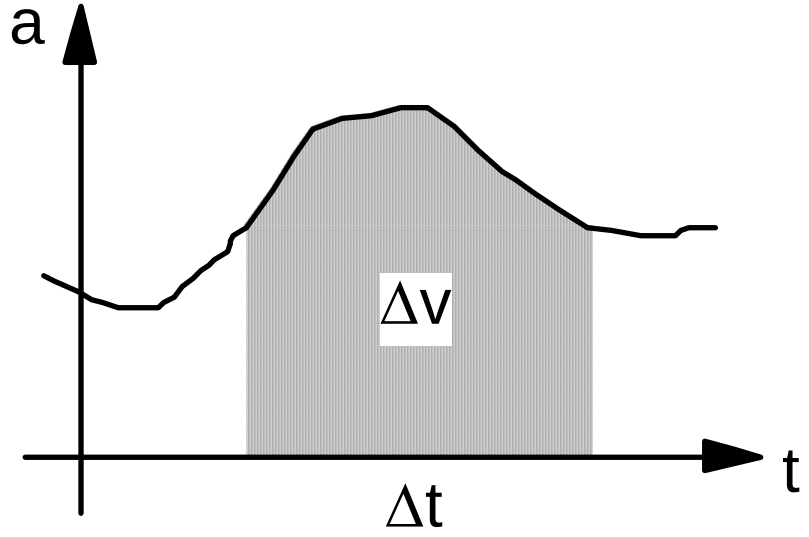
Ort s ↔ Geschwindigkeit v





Geschwindigkeit v ↔ Beschleunigung a





Gleichmässig beschleunigte Bewegung

$$a = \text{konst}$$

$$v = v_0 + a\,t$$

$$s = s_0 + v_0\,t + \frac{1}{2}\,a\,t^2$$