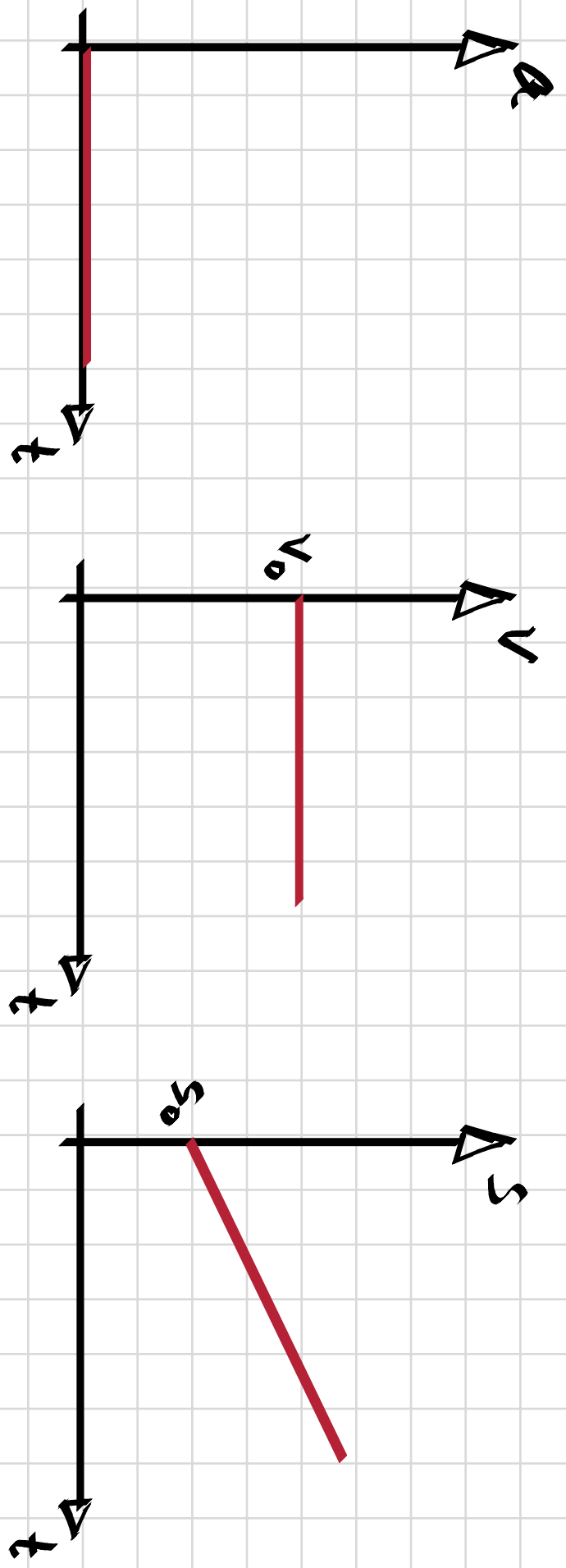


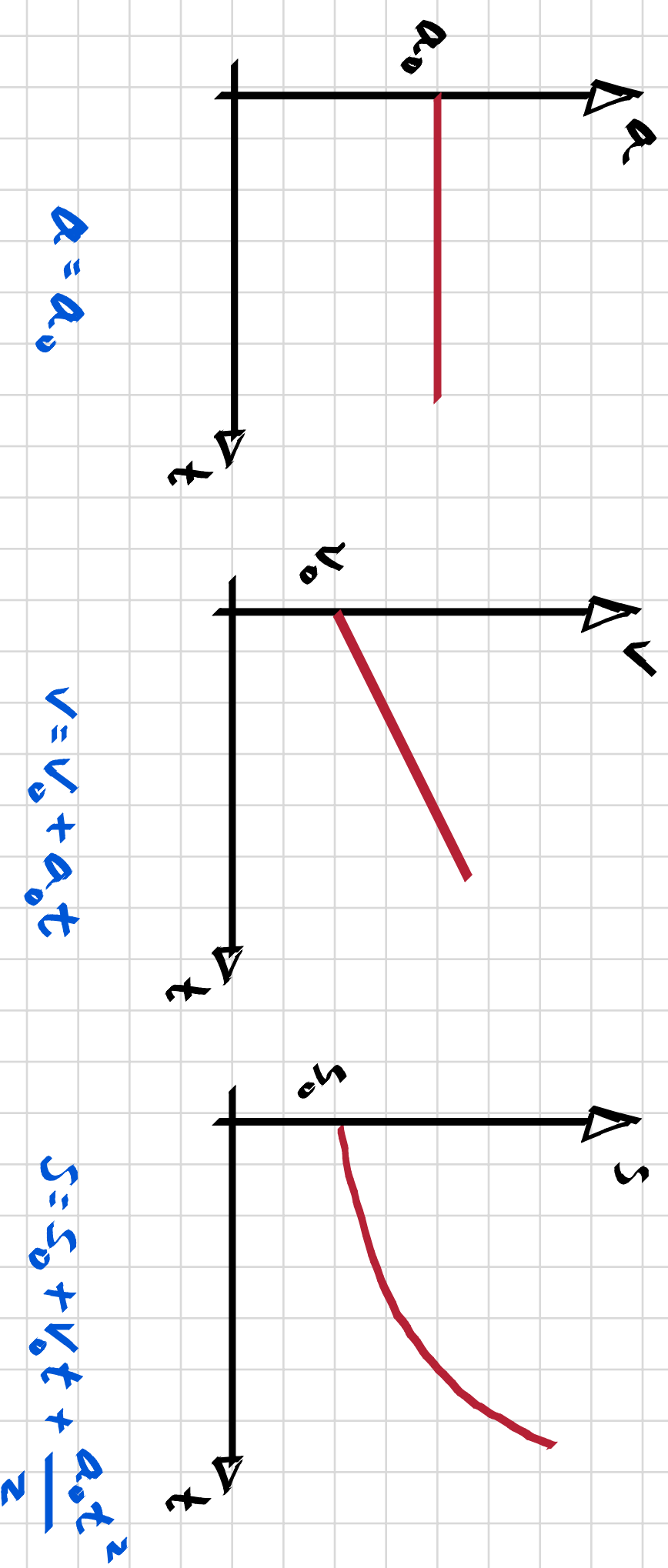
Rörelse som funktion av tiden då $t_0 = 0$

JUN 2025

Konstant
hastighet



Konstant
acceleration



Formler vid konstant acceleration

JAN 2025

$$v = v_0 + at$$

$$s = s_0 + v_0 t + \frac{at^2}{2}$$

Eliminera t.

Ansätt $s - s_0 = \Delta s \Rightarrow$

$$\Delta s = v_0 t + \frac{at^2}{2}$$

Multiplisera med $2a \Rightarrow$

$$2a \cdot \Delta s = 2av_0 t + \frac{2a^2 t^2}{2}$$

Ansätt $t = \frac{v - v_0}{a} \Rightarrow$

$$2a \cdot \Delta s = 2av_0 \left(\frac{v - v_0}{a} \right) + \frac{2a^2 \left(\frac{v - v_0}{a} \right)^2}{2}$$

$$2a \cdot \Delta s = 2vv_0 - 2v_0^2 + v^2 - 2vv_0 + v_0^2$$

$$2a \cdot \Delta s = v^2 - v_0^2$$