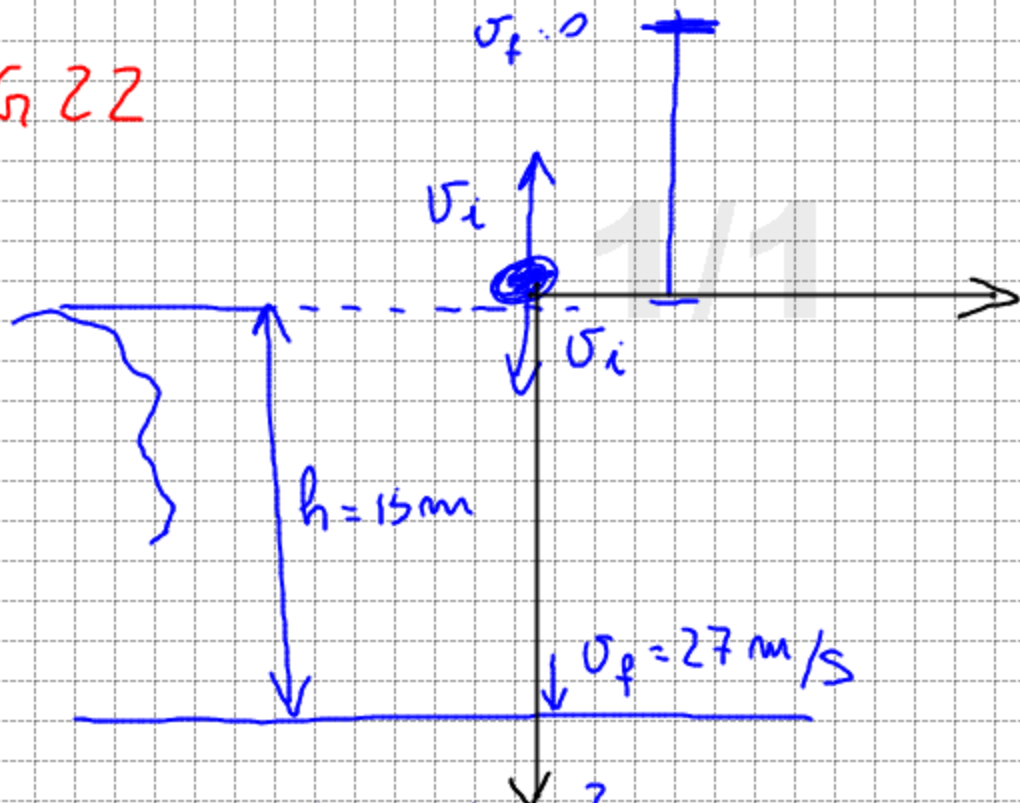


N24 PAG 22



$$S = S_0 + v_0 t + \frac{1}{2} a t^2$$
$$\Delta S = S - S_0 = 15 \text{ m} - 0 \text{ m} = 15 \text{ m}$$

$$15 \text{ m} = v_i t + \frac{1}{2} g t^2$$

$$\Delta S = \frac{v_f^2 - v_i^2}{2a}$$

$$v_f^2 = v_i^2 + 2g\Delta S$$

$$v_i = \sqrt{v_f^2 - 2g\Delta S} =$$

$$= \sqrt{\left(27 \frac{\text{m}}{\text{s}}\right)^2 - 2 \times 9,8 \frac{\text{m}}{\text{s}^2} 15 \text{ m}} =$$

$$= 20,85 \frac{\text{m}}{\text{s}} \approx 21 \frac{\text{m}}{\text{s}}$$

$$-g = \frac{\Delta v}{\Delta t} \quad -g = \frac{v_f - v_i}{\Delta t}$$

$$\Delta t = \frac{0 - v_i}{-g}$$

$$\Delta S = v_i t - \frac{1}{2} g t^2$$