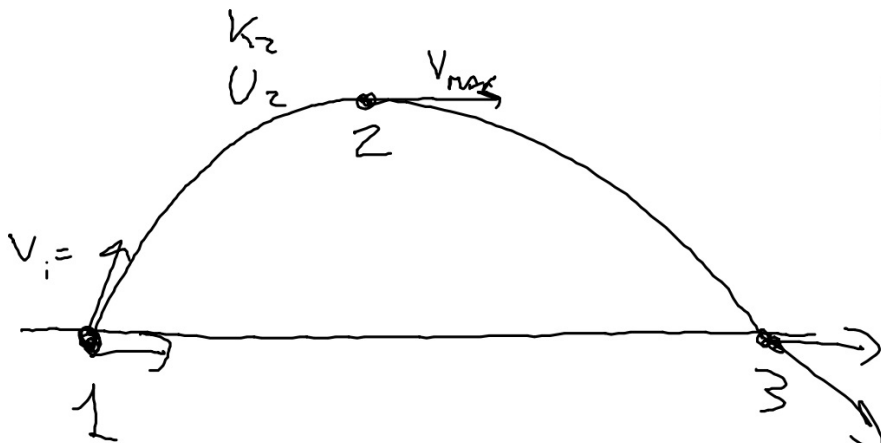


$$E = U + K$$

$$V_i = 8,30 \frac{\text{m}}{\text{s}}$$

$$V_m = 7,10 \frac{\text{m}}{\text{s}}$$

$$E_1 = E_2 = E_3$$



$$U_1 = 0$$

$$K = \frac{1}{2} m v_i^2$$

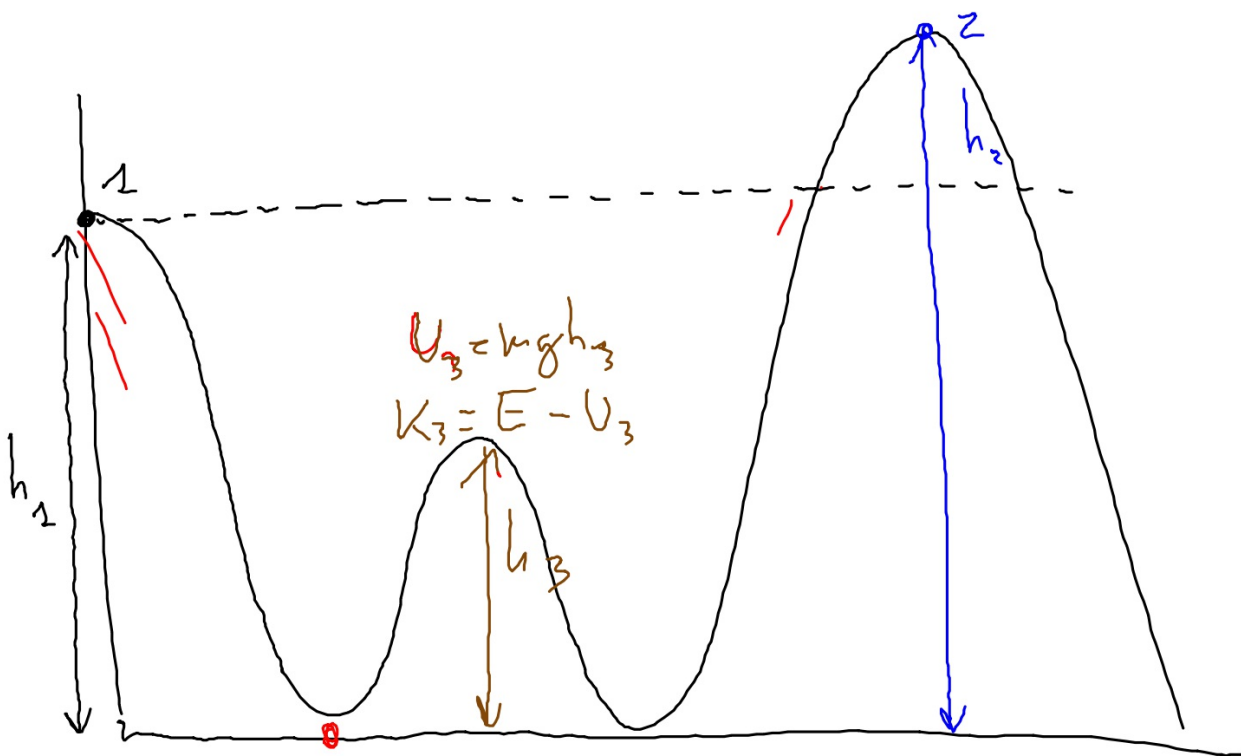
$$U_3 = 0$$

$$K_3 = K_1$$

$$\text{④ } \cancel{U_1} + K_1 = \underline{U_2} + K_2 = K_3$$

$$\frac{1}{2} m v_1^2 = m g h_2 + \frac{1}{2} m v_2^2$$

$$g h_2 = \frac{1}{2} v_1^2 - \frac{1}{2} v_2^2 \quad h_2 = \frac{1}{2g} (v_1^2 - v_2^2)$$



$$U_1 = mgh_1$$

$$K_1 = \frac{1}{2}mv_1^2$$

$$E_1 = E_2$$

$$\frac{1}{2}mv_1^2 + mgh_1 = mgh_2$$