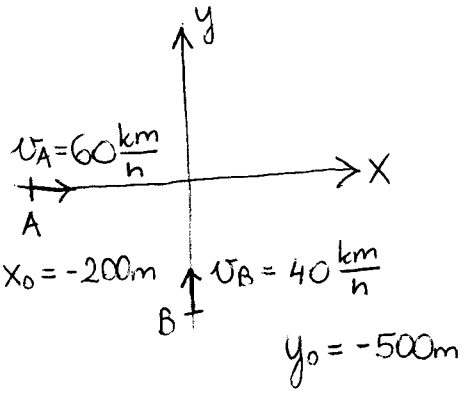
1.)



(i) $t(d_{min}) = ?$ (ii) $d_{min} = ?$

$$x = \frac{a_x}{2} t^2 + v_{0x} t + x_0$$

$$d_{PQ} = \sqrt{(x_P - x_Q)^2 + (y_P - y_Q)^2}$$

(i) $x = x_0 + v_x t$

$y = y_0 + v_y t$ $\quad d_{min}$ amikor d^2_{min}

$$d^2 = x^2 + y^2 = (x_0 + v_x t)^2 + (y_0 + v_y t)^2$$

d^2 minimális amikor $\frac{d(d^2)}{dt} = 0$

$d^2 = 5200t^2 - 64t + 0{,}29$ $\quad \frac{d(d^2)}{dt} = 10400t - 64 = 0 \Rightarrow \underline{\underline{t}}$

(ii)

$d^2 = (x_0 + v_x t)^2 + (y_0 + v_y t)^2 \leftarrow$ beírni "t"-t (i)-ből

$\Downarrow$

$\underline{\underline{d_{min}}}$