01_4_003

$V_0 = 100 \frac{km}{h} = 27.7 \frac{m}{s}$

$t_d = 0.65\ s$

$\mu_k = 0.8$

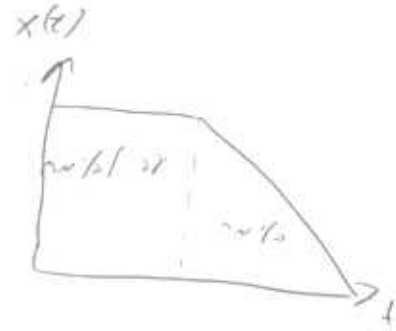
$F = \mu_k mg$

$a = \mu g$

$V^2 = V_0^2 - 2a\Delta x$

$0 = V_0^2 - 2a\Delta x$

$\Delta x = \frac{V_0^2}{2a}$



$S_{min} = V_0 \cdot t_d + \frac{V_0^2}{2a}$

$S_{min} = V_0 \cdot t_d + \frac{V_0^2}{2g\mu} = 66.9\ m$

$d = 1.5 \cdot V_0 = 41\ m$

$S_{min} = 41 - 25 = 16\ m$

$S_{min} = 175\ m$