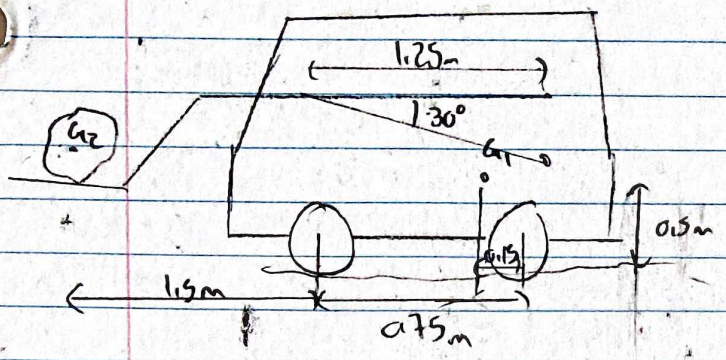
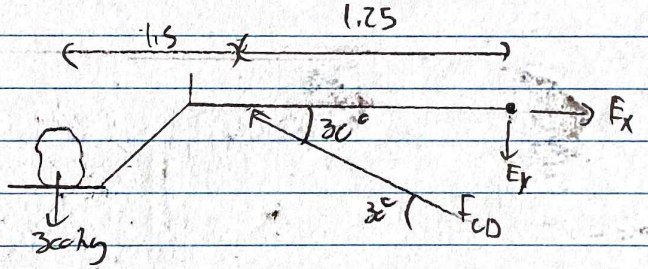
Solutions: 21-S-6.6-MK-03



$\Sigma M_A = (0.5m)(300kg)(9.81m/s) - (1160kg)(9.81m/s)(0.75-0.15) + (0.75m)(F_B)$

$F_B = \dfrac{(1160)(9.81)(0.75-0.15) + (0.5)(300)(9.81)}{0.75} = 3375\,N = f_B$

$\Sigma f_y = -(1160kg)(9.81) - (300kg)(9.81) + 3375\,N + f_A \rightarrow f_A = 11143.N$



$\Sigma M_E = (300\,Kg)(9.81m/s)(1.5m+1.25m) - (1.25m)(\sin 30)(F_{CD})$

$F_{CD} = 12949.2\,N \rightarrow 6474.6\,N$ por cylinder

$\Sigma F_x = -f_{CD}\cos 30° + E_x \rightarrow E_x = 5607\,N$

$\Sigma f_y = -\left(\frac{300}{2}\right)(9.81) + \sin 30\,(6474.6\,N) - E_y \rightarrow E_y = 1765.8\,N$

$E = \sqrt{5607^2 + 1766^2} = 5878.6\,N$