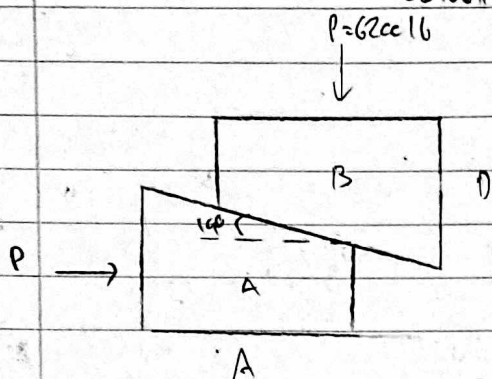
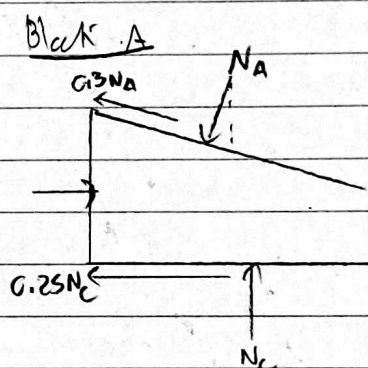
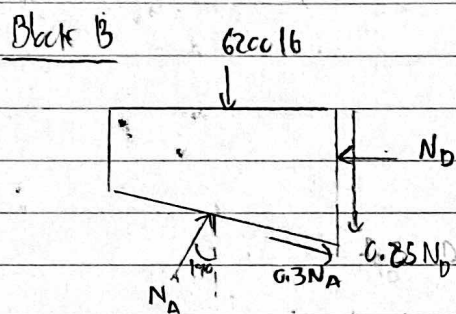


Solution 5: 21-5-8.3-MK-01



$$\mu_g = 0.25$$

$$\mu_s = 0.3$$



Block B

$$\sum F_x = 0 = 0.3 N_A \cos(19) + N_A \sin(19) - N_D$$

$$① \quad 0.609 N_A - N_D = 0 \quad 0.25 N_D = 6200$$

$$\sum F_y = N_A \cos(19) - 0.3 N_A \sin(19) - 0.25 N_D - 6200$$

$$② \quad 0.847 N_A - 0.25 N_D = 6200$$

using system solver $\rightarrow N_A = 8924.1 \text{ lb}$

$(N_D = 5434.8 \text{ lb})$

Block A $\sum F_y = 0 = 8924.1 \cos 19 + 0.3 (8924.1) \sin 19 + N_C \rightarrow N_C = 7566.3 \text{ lb}$

$\sum F_x = 0 = P - 0.25 (7566.3) - 0.3 (8924) \cos 19 - 8924 \sin 19 \rightarrow P = 7328.2 \text{ lb}$