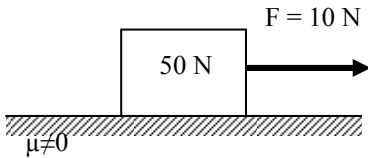


W3.08**STATIC EQUILIBRIUM $\sum F=0$ -KEY**

Find the normal force, frictional force & the minimum coefficient of static friction.

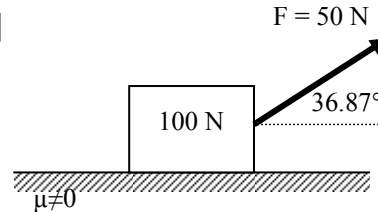
$$\mu_{\min} = \frac{\vec{F}_f \text{ NEEDED}}{|\vec{F}_{\text{normal}}|}$$

[1]



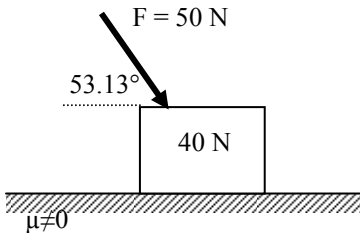
$$F_N = 50 \text{ N} \quad F_f = 10 \text{ N}, \quad \mu_{\min} = 0.2$$

[2]



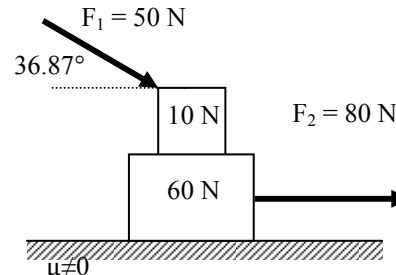
$$F_N = 70 \text{ N} \quad F_f = 40 \text{ N}, \quad \mu_{\min} = 0.571$$

[3]



$$F_N = 80 \text{ N} \quad F_f = 30 \text{ N}, \quad \mu_{\min} = 0.375$$

[4]

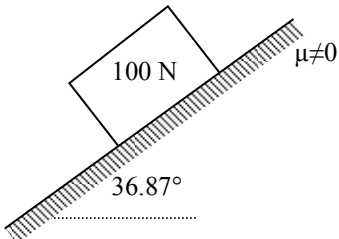


$$F_N = 40 \text{ N} \quad F_f = 40 \text{ N}, \quad \mu_{\min} = 1.0$$

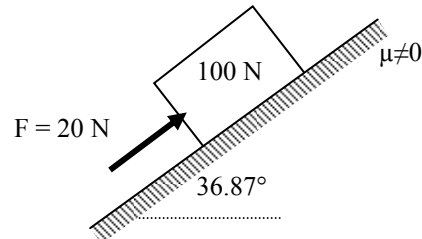
$$F_N = 100 \text{ N} \quad F_f = 120 \text{ N}, \quad \mu_{\min} = 1.2$$

[6]

[5]

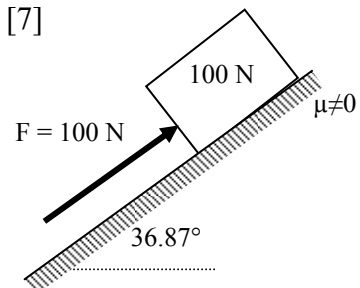


$$F_N = 80 \text{ N} \quad F_f = 60 \text{ N}, \quad \mu_{\min} = 0.75$$



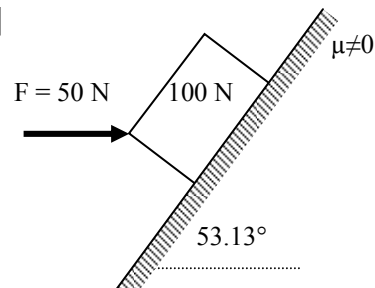
$$F_N = 80 \text{ N} \quad F_f = 40 \text{ N}, \quad \mu_{\min} = 0.5$$

[7]



$$F_N = 80 \text{ N} \quad F_f = 40 \text{ N}, \quad \mu_{\min} = 0.5$$

[8]



$$F_N = 100 \text{ N} \quad F_f = 50 \text{ N}, \quad \mu_{\min} = 0.5$$