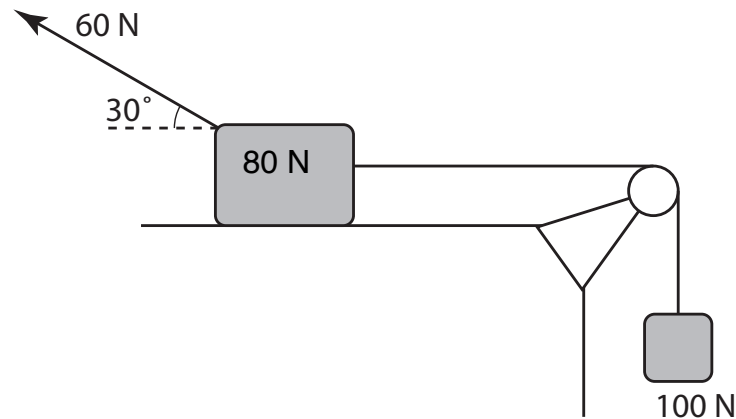
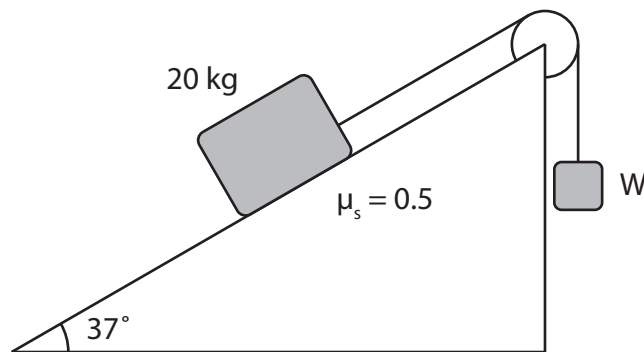


***Static Equilibrium:
Bodies on surfaces***

1. Find the frictional force and the coefficient of static friction for the system shown. Assume the 80 N block is just about to slip on the surface.



2. Calculate the range of values that W can have in order that the block just remains in equilibrium for the situation shown.



answers

1. $F_f = 48 \text{ N}$, $\mu_s = 0.96$
 2. $40.5 \text{ N} < W < 200 \text{ N}$, calculated using the approximation $g = 10 \text{ m/s}^2$. In general it is preferable to use $g = 9.8 \text{ m/s}^2$.