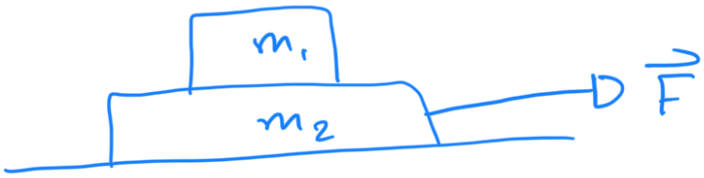

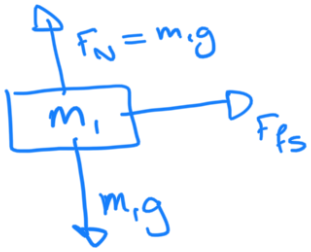

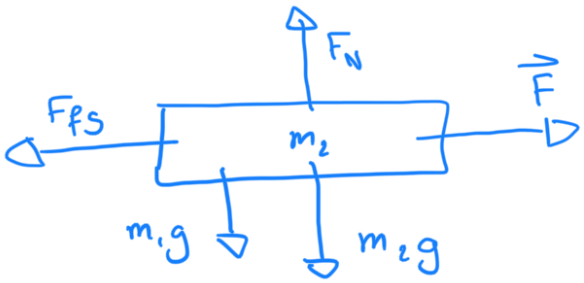

$\sum F_x = F_{fs} = m_1 g \mu_s$

Maximum Static Friction

$\sum F_x = F - F_{fs}$

must overcome the force of static friction at least so that the board can be pulled from under the box.

$\Rightarrow F_{min} = F_{fs}$

$$\boxed{F_{min} = m_1 g \mu_s}$$

since it would be equal but opposite direction