



for A to slide  
against B,  
 $F_1$  must be greater  
than  $\mu_{SB} \cdot N_1$

$$F_1 = \mu_{SB} \cdot m_A \cdot g$$

B will slide against the ground if

$$F_2 > \mu_{SG} N_2$$

since  $\mu_{SB} m_A g > \mu_{SG} (m_A + m_B) g$ ,

block B is sliding when A begins to slide

$$\sum F_A = P - m_A g \mu_{SB} = m_A \cdot a$$

$$\sum F_B = m_A g \mu_{SB} - (m_A + m_B) g \mu_{KG} = m_B a$$

$$P = m_A g \mu_{SB} + \frac{m_A}{m_B} (m_A g \mu_{SB} - (m_A + m_B) g \mu_{KG})$$