Suppose that you are standing on a train accelerating at 0.20 \( g \). What minimum coefficient of static friction must exist between your feet and the floor if you are not to slide?

Newton’s 2\(^{nd}\) law:
\[ F = ma \rightarrow F_f = m (0.20g) \]
where \( F_f = \mu_s F_N = \mu_s (mg) \)
Thus, \( \mu_s (mg) = m (0.20g) \)
So, \( \mu_s = 0.20 \)

Newton’s Laws of Motion