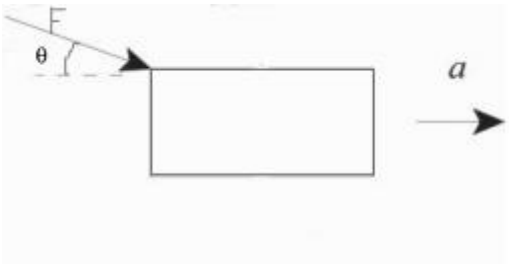
Answer on Question #42983 – Physics - Mechanics | Kinematics | Dynamics

Task:

If there is no friction between a block of mass 70 kg and the surface, what is the acceleration of block 1, a?. Enter your answer in m/s^2

Solution:

If motion on horizontal surface, then:



$$F\cos\theta = ma \Rightarrow a = \frac{F\cos\theta}{m} = \frac{F\cos\theta}{70}\left[\frac{m}{s^2}\right].$$

Answer: $a = \frac{F\cos\theta}{70}(m/s^2).$