

Answer on Question #43408, Physics, Mechanics | Kinematics | Dynamics

If the 7.50 kg block experiences a friction force of 12.8 N, the magnitude of the acceleration of this system is?

Solution:

The friction force is the force exerted by a surface as an object moves across it or makes an effort to move across it.

$$F_{frict} = ma$$

Thus, the acceleration is

$$a = \frac{F_{frict}}{m} = \frac{12.8}{7.50} = 1.71 \text{ m/s}^2$$

Answer: $a = 1.71 \text{ m/s}^2$.