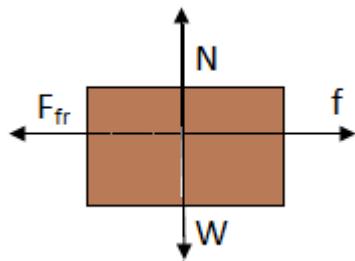


Answer on Question #64571, Physics / Mechanics | Relativity

A block weighing 7 N requires a force of 2.7 N to push it along at constant velocity. What is the coefficient of friction for the surface?

Solution:



Write Newton's second law

$$ma = f + W + N + F_{fr}$$

$$ma = 0$$

$$Ox: F_{fr} = f$$

$$Oy: N = W$$

Friction force

$$F_{fr} = \mu N$$

$$\mu W = f$$

$$\mu = f / W$$

$$\mu = 2.7 \text{ N} / 7 \text{ N} = 0.39$$

Answer: 0.39

Answer provided by <https://www.AssignmentExpert.com>