**Answer on Question 48991, Physics, Mechanics | Kinematics | Dynamics**

**Question:**

A 5 kg box is tossed across the floor at 4 m/s and slides to a stop in 3 s. What is the average force of friction?

**Solution:**

From the definition of the impulse we have:

$$\overline{F}\,\Delta t = mv,$$

So, substituting data from the conditions of the problem we obtain:

$$\overline{F} = \frac{mv}{\Delta t} = \frac{5kg \cdot 4\frac{m}{s}}{3s} = 6.7N.$$

**Answer:**

Average force of friction is 6.7N.