

Module 05 - Lesson 2

Using Newton's Third Law

Question 1: How much force does an 60.0-kg professor exert on her chair while sitting at rest on it?

Question 2: An 8-N force is applied to a retractable pen in order to push its spring mechanism that has a constant of $k = 2000$ N/m. Identify any pair of forces related via Newton's Third Law, and calculate the amount by which the spring compresses.

Problem: A 100-kg astronaut pushes with a 50-N force on a spacecraft of mass of 10,000 kg. Find the acceleration of the spacecraft and of the astronaut.