

Chapter 6 rev e

Show data, diagrams, and work: $g = -9.81 \text{ m/s}^2$

1. A 15.0 kg box is accelerated across the floor by a horizontal force for 0.550 m and reaches a velocity of 3.70 m/s. What is the net force applied to the box?
2. What is μ for problem #1 if the box only reaches a velocity of 2.50 m/s? (use the F_a you got from #1)
3. A 3.30 kg book falls out of your backpack when you are running to class at 3.77 m/s. What is the acceleration of the book after it hits the floor if μ is 1.09?
4. How far does the book slide after it hits the floor? (from #3)