

Chpt 6 rev c

1. A 44 g bullet reaches a speed of 450 m/s in a 1.1 m barrel. A) What is the acceleration of the bullet in the gun?
B) What force was applied to the bullet by the gun?
2. The bullet in #1 strikes a tree and imbeds in it 4.5 cm before coming to rest. A) What acceleration does the bullet experience. B) What force did the tree apply to the bullet to stop it?
3. What force does it take to accelerate a 7.0 kg shot-put straight up at 4.5 m/s^2 ?
4. A 7.5 kg discus hits the ground at 35 m/s and slides to rest in 12.6 m. What is the size of the friction?
5. A force of 45 N accelerates a 12 kg box across the floor at 2.3 m/s^2 . What is the size of the friction force?
6. A 45 kg box is pulled at a constant velocity across a horizontal surface by a 130 N force acting at 22° above the horizontal. What is size of the friction force?