

# Chapter 6 rev d

*Show data, diagrams, and work:*

1. A 145 g baseball is thrown at 91 mph. The pitcher thrown the ball over a 2.10 m throwing motion. The catcher stops the ball in 22 cm after it hits his glove. A) What force does the pitcher apply to the ball? B) What force does the catcher apply to the ball to stop it?
2. A 175 lb person falls from a 40.0 foot cliff into water and stops in 3.75 feet once he hits the water? What force does the water apply to the person? (3.28 ft = 1 m and 4.45 N of 1 lb)
3. A 20. kg box is pulled across the floor by a 200. N force directed  $45^{\circ}$  above the horizontal. What is  $\mu$  if the box accelerates at  $1.0 \text{ m/s}^2$ ?
4. A 25 kg box is on a  $20.0^{\circ}$  ramp and accelerates down at  $-1.5 \text{ m/s}^2$ . What is  $\mu$ ?