

Recitation Instructor (circle one): Moe Larry Curly Groucho Chico Harpo

Class time (circle one): 10:30 11:30

QUIZ #7

(1) A 100 g ball is flying through the air with speed 10 m/s at an angle 45° above the horizontal. A 50 g bird, traveling towards the ball and flying level to the ground, hits it and, stunned, comes straight down. The ball's speed is unchanged, but its direction changes a little, to 60° , after the bird hit it.

- (a) What was the impulse acting on the ball during the collision?
(b) What was the bird's speed before the collision?

(2) A 0.80 kg lump of clay hits a 1.2 kg block of wood at rest and sticks onto the block. The block then rises to a height of 5.0 cm above its original position before coming back down. How fast was the clay moving when it hit the block?

