Physics 201 Quiz 5

Feb 11, 2013

Word Problems

Show all your work and circle your final answer. (Ten points each.)

1. A projectile of mass 0.750 kilograms is shot straight up with an initial speed of 18.0 m/s. (a) How high would it go if there were no air friction? (b) If the projectile rises to a maximum height of only 11.8 meters, determine the magnitude of the average force due to air resistance.

2. A basketball player makes a jump shot. The 0.600 kilogram ball is released at a height of 2.00 meters above the floor with a speed of 7.20 m/s. The ball goes through the net 3.10 meters above the floor at a speed of 4.20 m/s. What is the work done on the ball by air resistance (non-conservative force)?