Physics 150 – Basic Physics

Problem Set #3

Problem Set Due: Mon., Sept. 21, 2015

Read Bloomfield: Chapters 1, 2, (Sections 1.3, 2.3)

There will be a Quiz #1 on Wednesday, Sept. 23

Algebra Exercises (show explicitly all your work for full credit):

1. The total energy follows the relation: \( E_{\text{Total}} = mgh + \frac{1}{2}mv^2 \). Solve for the mass \( m \).

2. Given that \( m_{1i}v_{1i} + m_{2i}v_{2i} = m_{1f}v_{1f} + m_{2f}v_{2f} \), solve for \( v_{1f} \).

Physics Problems (show explicitly all your work for full credit):

3. Bloomfield: Exercise 30, page 38
4. Bloomfield: Problem 17, page 39
5. Bloomfield: Problem 20, page 39
6. Bloomfield: Problem 9, page 85
7. Bloomfield: Exercise 10, page 85
8. Bloomfield: Problem 11, page 85