

1. Problem 5.4 parts a, b, c and e.

2. Problem 5.2

3. Problem 5.6

Note: Error in 5<sup>th</sup> Printing and sooner. Equation describing Newton's Law in Lagrangian Mechanics should read:

$$\left(\frac{\partial L}{\partial \dot{x}}\right)_x = \left(\frac{\partial}{\partial t}\right)\left(\frac{\partial L}{\partial \dot{x}}\right)_x$$

4. Problem 6.2

5. Problem 7.1

Be sure to state and justify all assumptions made

---