

## **Exam 1 Comments**

**Phys 410 Fall 2015**

**Average: 58 / 100**

**Standard Deviation: 18**

**Maximum: 90**

Problem 3 Under-damped harmonic oscillator with a brief constant force. There is no need to re-derive the equations for the particle displacement! Just use the established results for  $x(t)$ , for the appropriate case.

Problem 4 Mass colliding with a triangular group of particles that are constrained to rotate. Many people correctly identified that a conservation law was not valid, but they did not explain why it was invalid. Kinematic observations can reveal that a conservation law does not apply, but this does not explain why a conservation law does not hold (this is a problem in dynamics).