Name:_____

Homework Week # 1

Measurement & Math Review
Due Thurs 8/29/19

Reading

Tuesday: **Cutnell & Johnson (C&J) 1.1-1.4**
Thursday: **C&J 1.5, 2.1-2.3**

Pre-Calculus (MATH 143) Review

Problem 1. Consider a rocket launched from Vandenberg Airforce Base. Its height, in meters above sea level, as a function of time in seconds can be approximated by $h(t)=-4.9t^2+229t+112$. What is the maximum height the rocket approximately attains?

Problem 2. Reconsider problem 1. When can the height of the rocket be at sea level mathematically (h = 0)? When can the height be at sea level physically if the rocket is launched at t = 0?

Problem 3. A scientist begins with 100 milligrams of a radioactive substance that decays exponentially. After 15 hours, 50 mg of the substance remains. How many milligrams will remain after 45 hours?

Problem 4. Graph the function $s(t)=5\cos(\frac{\pi}{4}t)$ on a labeled plot. State the amplitude, period, and the first two zeros of the function.

Units & Measurements

Problem 5. **C&J 1.3.2**

Problem 6. **C&J 1.3.5**

Problem 7. **C&J 1.3.6**

Problem 8. **C&J 1.3.9**

Problem 9. **C&J 1.3.11**

Problem 10. **C&J 1.4.17**