#8 Section 11.3 Notes

December 5, '14

- **Acceleration** - A change in **Speed**, Change in **Direction** or Both.
  - Measured in m/s^2
  - The rate at which **Velocity** changes.
  - Acceleration due to Gravity on Earth = $9.8\ m/s^2$
  - $a = \frac{(V_f - V_i)}{t}$ a = Acceleration, V_f = Final Velocity, t = time, V_i = Intial Velocity

Example A:

A ball rolls down a ramp starting from rest. After 2 secs its velocity is $6\ m/s$. What is its Acceleration?

$$a = \frac{V_f - V_i}{t} = \frac{6\ m/s - 0\ m/s}{2\ s} = \frac{6}{2} = \boxed{3\ m/s^2}$$

Example B:

I speed my car up from $35\ m/s$ to $70\ m/s$ in [redacted] secs. What is its Acceleration?

10

$$\frac{70 - 35}{10} = \frac{35}{10} = \boxed{35\ m/s^2}$$