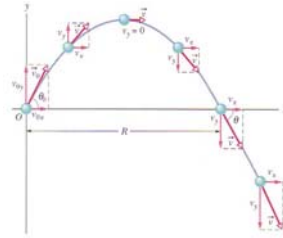


- Review of website and syllabus.
- Review of textbook.
- Introduction and chapter 1.

Classical Mechanics



$$\vec{F} = \frac{d\vec{p}}{dt}$$

Electromagnetism

$$\vec{F} = -\nabla U \quad F = \frac{kq_1q_2}{r^2}$$

Thermodynamics

- Large number of particles $\sim N_A$

$N_A = 6.022 \times 10^{23}$ = mole (the quantity of matter that contains as many identical objects (e.g. atoms, molecules, formula units, ions) as the number of atoms in exactly 12 g of ^{12}C)

- Dissipation
- Equilibrium systems



Lots of new definitions \Rightarrow Quite verbal, unusual for physics

Why thermodynamics?



Convert heat into motion (work).



Heat \Leftrightarrow Work

Phase transitions

