

PHYS 1443 – Section 001

Lecture #6

Tuesday, June 14, 2011

Dr. **Jaehoon Yu**

- Newton's Laws of Motion
 - Newton's third law of motion
 - Categories of Forces
- Free Body Diagram
- Application of Newton's Laws
- Force of friction



Announcements

- Mid-term exam
 - In the class on Tuesday, June 21, 2011
 - Covers: CH 1.1 – what we finish Monday, June 20 plus Appendices A and B
 - Mixture of free response problems and multiple choice problems
- Bring your special project #2 during the intermission



Special Project for Extra Credit

A large man and a small boy stand facing each other on **frictionless ice**. They put their hands together and push against each other so that they move apart. a) Who moves away with the higher speed, by how much and why? b) Who moves farther in the same elapsed time, by how much and why?

- Derive the formulae for the two problems above in much more detail and explain your logic in a greater detail than what is in this lecture note.
- Be sure to clearly define each variables used in your derivation.
- Each problem is 10 points.
- Due is Monday, June 20.

