

“If I have seen further than others, it is by standing on the shoulders of giants”

-- Newton

## U of T Pre-Medical Society

Come out to our first meeting of the year!

**Sept. 20, 2006**

**MSB 3154**

Member registration begins at **4 pm**.

Information/Q&A session with a U of T Medical School admissions rep. from **4:30-6 pm**.

Year-rep. elections from **6-7 pm**. 1<sup>st</sup> year students are welcome to run. Candidates should be prepared to make a brief speech (< 2 min.)

Free pizza/pop will be available!

## The Main Physics Server:

- Catastrophic failure mid-afternoon Tuesday
- Back up mid-morning Friday
  - Some parts are still missing
- Some of my email has been permanently lost!

### Standalone *MasteringPhysics*:

- The textbook store has run out. More are on the way
- The due date for the 1<sup>st</sup> Pre-Class Quiz has been moved back to **10AM Wednesday September 20**

## Now Available on *MasteringPhysics*

- Pre-Class Quiz Q1 Chpts 02-04
  - Due by 10AM Wednesday September 20
- Problem Set Q1 Chpts 02-04
  - Due by 11:59PM Friday September 22
- Pre-Class Quiz Q1 Chpts 05-06
  - Due by 10AM Monday September 25

## Tutorials Begin This Week

- You can find out where your tutorial meets from Student Online Record Management (STORM)
- <http://www.storm.utoronto.ca/PHY138Y1Y/student/>
  - Linked to from the Mechanics page:  
<http://www.upscale.utoronto.ca/PHY138Y/Mechanics/>
  - Linked to from the PHY138 page:  
[http://www.physics.utoronto.ca/~phy138yw/front\\_page.htm](http://www.physics.utoronto.ca/~phy138yw/front_page.htm)

## About STORM

- <http://www.storm.utoronto.ca/PHY138Y1Y/student/>
  - Note: is case sensitive!
- Requires a login and password:
  - Login: your student number
  - Password: your surname
    - Also case sensitive!

## Your First Tutorial

- Take your **Student Workbook**
- You will take a brief survey:
  - If you answer all questions on the survey **and** register your clicker, you will receive a bonus in PHY138 equal to the value of one Pre-Class Quiz
  - Although no marks are associated with clicker use, we will be paying attention to who is answering questions in class

## To Register Your Clicker

- Go to <http://www.iclicker.com/>
- Choose **Register**
- For *Institution* choose:  
*University of Toronto – St. George*
- For *Student ID* enter your student number
- For *Clicker ID* enter the 6 character code on the back of your clicker
- **Must be completed by October 1**

Institution:

Student ID:

Clicker ID:

## What is examinable

- All sections of the textbook that are listed in the Syllabus
- Supplemental Topics that are listed in the Syllabus
- In-class questions, perhaps slightly modified.
- Problems from MasteringPhysics, perhaps slightly modified

## Last Time 1/2

- Classical Physics: the world is a mechanistic clockwork, describable by mathematical laws.
- Physics describes the world using the language of mathematics and everyday words with precise definitions.
- Operational Definitions: operations that define words and concepts.

## Last Time 2/2

- Motion Diagrams
- Models
- Position and Time
  - Coordinate systems
  - Choosing time  $t = 0$
- Position vector
- Displacement Vector

## Today

- Finish Chapter 1
- Chapter 2 – Kinematics: The Mathematics of Motion
- Perhaps begin Chapter 3 – Vectors and Coordinate Systems

We are still setting up the *language* we will need. Physics begins on Wednesday

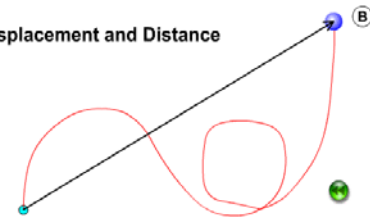
## Introducing Guoying Qin

- When you have a question during class, write it on a piece of paper
  - Legibly please
- Raise your hand
- Guoying will come and get the question and bring it to me
- I will attempt to answer the question

She will **not** climb up into the balconies.

## Displacement and Distance

### Displacement and Distance

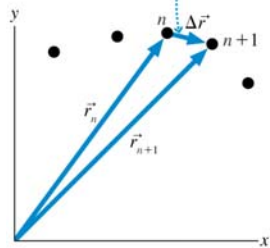


**(A)** distance = the length of the curved line  
 displacement = the length and direction of the straight line

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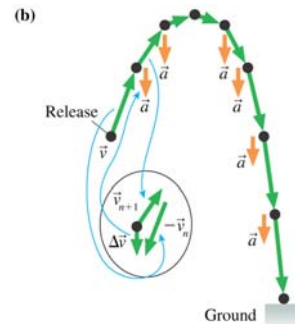
Figure 1.10

The object's displacement between frame  $n$  and frame  $n+1$ .



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Figure 1.22 (b)



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## Problem Solving (cf. pg. 24)

- Model
- Visualise
  - Pictorial, physical & graphical
- Guess the answer
- Solve
  - If numeric, put in numbers last
- Assess

## Example

- Toronto – Barrie: 90 km
- Mathematician: north from Toronto to Barrie at 100 km/hr
- Physicist: north from Toronto to Barrie at 125 km/hr
- Leave at same time
- How long is the physicist in Barrie when the mathematician shows up?