ENGR 210 - Statics		Section:
Tutorial 4	Your Name:	
	Partners' Names:	

TRUSSES

In all parts of this exercise, assume that the applied forces have a magnitude of 100 Nts. Assume that the length of every horizontal and vertical member is 2 meters.

Part 1: For the truss loaded as shown below:

- i. Compute the reactions at points A and D. Show the direction and magnitude on the drawing.
- ii. Using only your intuition and logic, label each member on the sketch below as being in compression [C], tension [T], or as a zero-force member [0].
- iii. Build the truss and verify your predictions.
- iv. **Draw free-body diagrams** (FBDs) of nodes A, B, D, F, C, and E, in that order, and **calculate** (and show) the forces in each member.
- v. Experiment with exchanging or removing truss members. For example try removing expected zero-force members to verify your expectations.



Part 2: For the two trusses and loadings shown below:

- i. **Compute** the reactions at points A and D for the first truss and A and B in the second truss. Show the directions and magnitudes of the reactions on the drawing.
- ii. On the drawing, label each member as being in compression [C], tension [T], or as a zero-force member [0].
- iii. Build the truss and verify your predictions.





Part 3: For the truss and loading shown below:

- i. **Compute** the reactions at points A and B.
- ii. Label each member as being in compression [C], tension [T], or as a zero-force member [0].
- iii. Build the truss and verify your predictions.
- iv. Using the **method of sections**, compute the forces in members CF, CE and DF.

