A web page which can help you with this assignment is:

www.math.rutgers.edu/courses/251/Lab_Backgrounds/Lab1_Background.html

You are encouraged to discuss this assignment with other students and with the instructors, but the work you hand in should be your own.

A webpage will be posted listing individualized data for each student. For this webpage, go to:

www.math.rutgers.edu/ $\sim$ humbmont

Then click on the link Teaching on the left hand side of the page and follow links to the data for Lab1.

For this lab, the data will consist of coordinates for three points, p, q, and r, in $\mathbb{R}^3$. Then $\vec{pq}$ will denote the vector directed *from p to q* and $\vec{pr}$ will denote the vector directed *from p to r*. The vector $\vec{v}$ will be $\vec{pq} \times \vec{pr}$, the cross product (vector product) of the two vectors. T will be the triangle in $\mathbb{R}^3$ whose vertices are p, q, and r.

Use `Maple` to compute $\vec{pq}$, $\vec{pr}$, and $\vec{v}$. Use `Maple` to sketch these three vectors and the triangle T in one picture.

This assignment is due **Friday Sept 26**. Late submissions will *not* be accepted.

Please hand in the following material:

0. All pages should be labeled with your name and section number. Also, please *staple* together all the pages you hand in.

1. A printout of all `Maple` instructions you have used. (Yes, you may and should "clean up" by removing the instructions that had errors.)

2. Identify clearly in your printout the components of the vectors $\vec{pq}$, $\vec{pr}$, and $\vec{v}$. (These identifications can be done "by hand" on your printout.)

3. Hand in a printout of a picture of the three vectors and the triangle T. The picture should include labeled axes and should show the geometry of the situation well. Label the points p, q, and r in your picture. Label the vector v in your picture. Label the triangle T in your picture. (These labels can be done "by hand" on your printout.)