

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/~rezarez

Then 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 **Tuesday Sept 30**. 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.)