MATH 251:H4–H6
Maple assignment 1
SPRING 2015

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

`http://www.math.rutgers.edu/courses/251/Maple/Lab1/Vectors.html`

can help you with this assignment; to find it, follow the "Maple in Math 251" link on the the Math 251 course webpage.

A website will be posted listing individualized data for each student. For this lab, the data will consist of coordinates for three points, $p$, $q$, and $r$, in $\mathbb{R}^3$. Then $\overrightarrow{pq}$ will denote the vector directed $p$ to $q$ and $\overrightarrow{pr}$ will denote the vector directed from $p$ to $r$. The vector $\overrightarrow{v}$ will be $\overrightarrow{pq} \times \overrightarrow{pr}$, the cross 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 $\overrightarrow{pq}$, $\overrightarrow{pr}$, and $\overrightarrow{v}$. Use Maple to sketch these three vectors and the triangle $T$ in one picture.

This assignment is due 10/9/15. Late submissions will *not* be accepted.

**Please hand in a printout of all Maple instructions that you use.**

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

- **You should clean up your submission by removing the instructions that had errors.**

  The work that you hand in should include:

1. A printout of all `Maple` instructions you have used. Identify clearly in your printout the components of the vectors $\overrightarrow{pq}$, $\overrightarrow{pr}$, and $\overrightarrow{v}$. (These identifications can be done "by hand" on your printout.)

2. 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 $\overrightarrow{v}$ in your picture. Label the triangle $T$ in your picture. (These labels can be done "by hand" on your printout.)