Math 240(9.4)

Worksheet 3

1. Find the cross product $a \times b$ and verify that it is orthogonal to both a and b. a=i+3j-2k, b=-i+5k

2. For the three points P(1,4,6), Q(-2,5,-1) and R(1,-1,1), answer the following.(a) Find a unit vector normal to the plane spanned by the three points above.

(b) Find the area of a triangle with three points above.

3. Are the following three vectors coplanar? In other words, are they in the same plane? $a = \langle 6, 3, -1 \rangle, b = \langle 0, 1, 2 \rangle, c = \langle 4, -2, 5 \rangle$