Calculus III Quiz 7 Fall 2000 11/10/2000

Each problem is worth 5 points. Show all work for partial credit.

1. Write an equation for the plane through the point (-4,3,-7) with normal vector **3i-2j+k**.

$a(x-x_0)+b(y-y_0)+c(z-z_0)=0$ where $\langle a,b,c\rangle = \vec{v}_\perp$

$$3(x+4)-2(y-3)+1(z+7)=0$$

2. Write the vector equation and parametric equations for the line through (10,7,-9) with direction vector <-5,-3,1>.

$$\langle 10,7,-9\rangle + t\langle -5,-3,1\rangle = \langle x,y,z\rangle$$

$$x = 10-5t$$
$$y = 7-3t$$
$$z = -9+t$$