

## QUIZ 1

(Math 200-Section B)

1. Find the parametric equations of the line that passes through the point  $P = (3, 0, 2)$  and is perpendicular to the vectors  $u = 2i + 3j + 1k$  and  $v = 3i + 4j + 5k$ . (4 pts)
2. Find the parametric equations of the line of intersection of the planes  $3x - 6y - 2z = 3$  and  $2x + y - 2z = 2$  (4 pts)
3. Find the point of intersection between the line  $x = -1 + 2t$ ,  $y = -1$ ,  $z = 3t$  and the plane  $2x - 3z = 8$ . (4 pts)
4. Find the equation of the plane that passes through the point  $P = (2, 1, -1)$  and is perpendicular to the line of intersection of the planes  $2x + y - z = 3$  and  $x + 2y + z = 2$ . (4 pts)
5. Show that if the planes  $A_1x + B_1y + C_1z = D_1$  and  $A_2x + B_2y + C_2z = D_2$  are parallel, then  $\frac{A_1}{A_2} = \frac{B_1}{B_2} = \frac{C_1}{C_2}$ . (4 pts)