

QUIZ 1

(Math 200-Section A)

1. Find the parametric equations of the line that passes through the point $P = (2, 1, 0)$ and is perpendicular to the vectors $u = 2i + 3j + k$ and $v = i + j - 2k$. (4 pts)
2. Find the parametric equations of the line of intersection of the planes $3x - 2y - 2z = 3$ and $2x + y - 2z = 2$. (4 pts)
3. Find the point of intersection between the line $x = 1 - 2t, y = 1, z = 2t$ and the plane $2x - z = 14$. (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)