

1 Math 53: Practice Problems

1) [#9 in §12.5] Find the parametric and symmetric equations for the line through the points $P(-8, 1, 4)$ and $Q(3, -2, 4)$.

2) [#31 in §12.5] Find an equation of the plane through the points $P(0, 1, 1)$, $Q(1, 0, 1)$, and $R(1, 1, 0)$.

3) [#78 in §12.5] Find the distance between the skew lines with parametric equations

$$x = 1 + t, y = 1 + 6t, z = 2t$$

$$x = 1 + 2s, y = 5 + 15s, z = -2 + 6s$$

4) [#37 in §12.5] Find the equation of the plane containing the following point and line: the point is $(-1, 2, 1)$ and the line is given by the intersection of the planes $x + y - z = 2$ and $2x - y + 3z = 1$.