

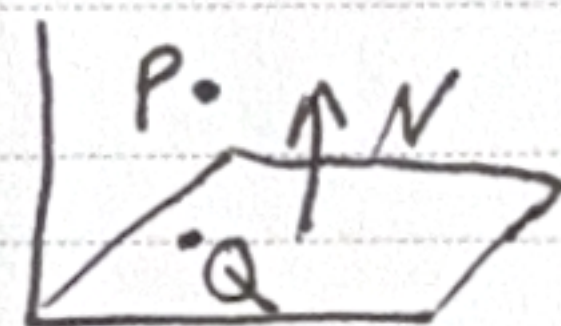
1. $\vec{P_1P_2} \times \vec{P_1P_3} = \begin{vmatrix} i & j & k \\ -1 & 1 & 0 \\ 0 & 1 & -1 \end{vmatrix} = -i + j + k$
 $\rightarrow -x + y + z = 2$

2. $\vec{A} = \langle 2, -1 \rangle \rightarrow \vec{N} = \langle 1, 2 \rangle$
 $\rightarrow x + 2y = 5$

Distances to

Planes and lines

1. $\vec{N} = \langle 2, 1, -2 \rangle$ $\vec{QP} \cdot \frac{\vec{N}}{|\vec{N}|} = \frac{2}{3}$
 $P = \langle 1, 0, 0 \rangle$
 $Q = \langle 0, 0, 0 \rangle$



2. $\vec{N} = \langle 2, 1 \rangle$ $\vec{QP} \cdot \frac{\vec{N}}{|\vec{N}|} = \frac{2}{\sqrt{5}}$
 $P = \langle 0, 0 \rangle$
 $Q = \langle 1, 0 \rangle$

