MAT232H S22 - TT1 Solutions - Q2

Version 1

Part A

$P_1(0,2,-6)$ $\quad P_2(0,2,-6)$

$\bar{v}_1 = \langle 0,-4,2\rangle \quad \bar{v}_2 = \langle 1,-1,2\rangle$

$$\bar{n} = \bar{v}_1 \times \bar{v}_2 = \begin{vmatrix} \bar{i} & \bar{j} & \bar{k} \\ 0 & -4 & 2 \\ 1 & -1 & 2 \end{vmatrix} = \langle -6,2,4\rangle$$

plane equation: $-6(x-0)+2(y-2)+4(z+6)=0$

$$-6x+2y+4z=-20$$

$$-3x+y+2z=-10$$