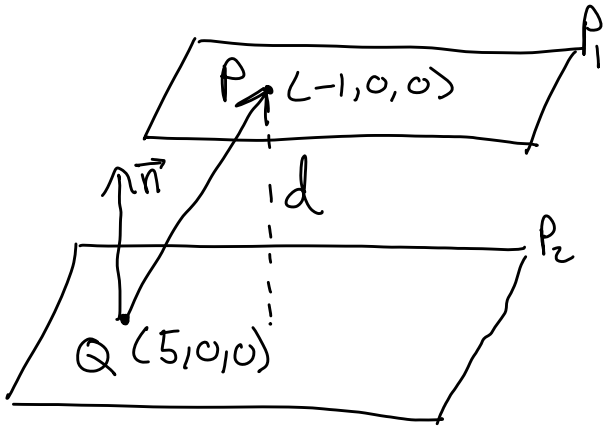
11.6 #18(b)

Find any point on plane P_1 or P_2, e.g. point $P: (-1,0,0)$ is on plane P_1. Now find distance from that point to the other plane using technique from (17a).



The point $Q: (5,0,0)$ is on plane P_2.

So $\overrightarrow{QP} = \langle -6,0,0 \rangle$.

The vector $\langle 1, -2, \frac{5}{2} \rangle \perp P_2$

[$\vec{n}$ can be any scalar multiple of $\langle 1, -2, \frac{5}{2} \rangle$, e.g. we can choose $\vec{n} = 2\langle 1, -2, \frac{5}{2} \rangle = \langle 2, -4, 5 \rangle$.]

By (17a), $d = \dfrac{|\overrightarrow{QP} \cdot \vec{n}|}{\|\vec{n}\|} = \dfrac{|-12|}{\sqrt{4+16+25}} = \dfrac{12}{\sqrt{45}}$