

AI5006 - Assignment 1

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Question :

Find the distance between the two planes $(2 \ 3 \ 4)x = 4$ and $(4 \ 6 \ 8)x = 12$

Solution :

If the two planes are of the form $n^T x = c_1$ and $n^T x = c_2$, Then the distance between the planes is given by :

$$\frac{|c_1 - c_2|}{\|\vec{n}\|}$$

So, the distance between the given planes is:

$$\frac{|4-12|}{\|[2 \ 3 \ 4]\|} = \frac{8}{\sqrt{29}}$$

