

Volumes and determinants

1. a) Find the volume of the parallelepiped with edges given by the origin vectors $\langle 1, 2, 4 \rangle$, $\langle 2, 0, 0 \rangle$, $\langle 1, 5, 2 \rangle$

2. We know $\begin{vmatrix} 1 & 2 & 3 \\ 4 & 5 & 6 \\ 7 & 8 & 9 \end{vmatrix} = 0$.

What does this say about the origin vectors $\langle 1, 2, 3 \rangle$, $\langle 4, 5, 6 \rangle$ and $\langle 7, 8, 9 \rangle$?

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