QUESTION
If $\mathbf{a} = \mathbf{i} + \mathbf{j} + \mathbf{k}$ and $\mathbf{b} = \mathbf{i} - 2\mathbf{j} - \mathbf{k}$ find $\mathbf{a} \times \mathbf{b}$.

ANSWER
$\mathbf{a} = (1, 1, 1),\ \mathbf{b} = (1, -2, -1)$
$\mathbf{a} \times \mathbf{b} = (-1 - (-2), 1 - (-1), -2 - 1) = \mathbf{i} + 2\mathbf{j} - 3\mathbf{k}$