

Note: Your PAR (both initial and final drafts) must be typed in \LaTeX .

Problem Statement

Let $\vec{a}, \vec{b} \in \mathbb{R}^3$ be linearly independent and let $\vec{c} = \vec{a} \times \vec{b}$ (the cross product of \vec{a} and \vec{b}). Finally, let $M = [\vec{a} | \vec{b} | \vec{c}]$ be the matrix with columns \vec{a} , \vec{b} , and \vec{c} .

1. Could $\det(M)$ ever be zero?
2. Could $\det(M)$ ever be negative?
3. Explain why $\det(M) = \|\vec{c}\|^2$.

Try to address all of these questions in a single narrative that takes less than one page.

Reflection

Turn the page and check off the icons for things you think you did well; circle the icons for things you would like feedback on.

Suggestions

Communication

Strengths



Show All Steps



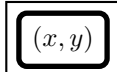
Explain Why,
Not Just What



Avoid Pronouns



Use Correct
Definitions



Define Variables,
Units, etc.

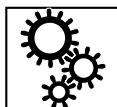


Create Diagrams

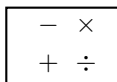
Suggestions

Accuracy

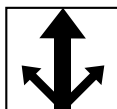
Strengths



Correct Setup



Accurate Calculations



Solve Multiple Ways



Answer Reasonable



Other
(Write Below)