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Task: Etivity 4 Cross Product calc

$$\vec{h} = \begin{bmatrix} 2 \\ 1 \\ 3 \end{bmatrix} \quad \vec{l} = \begin{bmatrix} 3 \\ 4 \\ 5 \end{bmatrix}$$

$$\vec{h} \times \vec{l} = \begin{bmatrix} 1.5 - 3.4 \\ 3.3 - 2.5 \\ 2.4 - 1.3 \end{bmatrix}$$

$$= \begin{bmatrix} 4 & -12 \\ 9 & - 8 \\ 8 & -3 \end{bmatrix}$$

$$= \begin{bmatrix} -8 \\ 1 \\ 5 \end{bmatrix}$$

$\longleftarrow$ Anti-commutative $\longrightarrow$

$$\vec{l} \times \vec{h} = \begin{bmatrix} 4.3 & -4.1 \\ 4.2 & -3.3 \\ 3.1 & -5.2 \end{bmatrix}$$

$$= \begin{bmatrix} 12 & -4 \\ 8 & -9 \\ 3 & -8 \end{bmatrix}$$

$$= \begin{bmatrix} 8 \\ -1 \\ -5 \end{bmatrix}$$

or

$$\vec{h} \times \vec{l} = \left[(1.5 - 3.4), (3.3 - 2.4), (2.4 - 1.3) \right]$$

$$= \left[(4 - 12), (9 - 8), (8 - 5) \right]$$

$$= \left[-8, 1, 3 \right]$$