PHYS 313: HW 01

Assignment 1

Due on February 6th, 2025 at 11:59 PM

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Problem 1.6:

Prove that
$$[\mathbf{A} \times (\mathbf{B} \times \mathbf{C})] + [\mathbf{B} \times (\mathbf{C} \times \mathbf{A})] + [\mathbf{C} \times (\mathbf{A} \times \mathbf{B})] = \mathbf{0}.$$
Under what conditions does $\mathbf{A} \times (\mathbf{B} \times \mathbf{C}) = (\mathbf{A} \times \mathbf{B}) \times \mathbf{C}$?

Solution

Solutions are placed below the problem statement, and can be split

Part A

into

Part B

different parts.