

Special Problem 2-3.4

Consider vectors \mathbf{A} , \mathbf{B} , and \mathbf{C} , where we know these facts:

- 1) All vectors are non-zero.
- 2) $\mathbf{B} = 2\mathbf{A}$
- 3) \mathbf{C} and \mathbf{A} are neither collinear nor anti-parallel

Find then, the resulting **numeric** value of the following expressions:

- a) $\mathbf{A} \times \mathbf{B}$
- b) $(\mathbf{A} + \mathbf{B}) \times \mathbf{B}$
- c) $\mathbf{C} \cdot (\mathbf{A} \times \mathbf{C})$
- d) $\mathbf{A} \cdot (\mathbf{B} \times \mathbf{C})$

Hint: Yes, you have enough information to find **numeric** answers!
Remember, you must provide **justification/analysis** for each expression.