Optional Parentheses

Remove all optional parentheses from the four vector identities

(scalar triple product) $\quad \boldsymbol{A} \cdot (\boldsymbol{B} \times \boldsymbol{C}) = \boldsymbol{B} \cdot (\boldsymbol{C} \times \boldsymbol{A}) = \mathbf{C} \cdot (\boldsymbol{A} \times \boldsymbol{B})$

(vector triple product) $\quad \boldsymbol{A} \times (\boldsymbol{B} \times \boldsymbol{C}) = (\boldsymbol{A} \cdot \boldsymbol{C})\mathbf{B} - (\boldsymbol{A} \cdot \boldsymbol{B})\boldsymbol{C}$

(scalar quadruple product) $\quad (\boldsymbol{A} \times \boldsymbol{B}) \cdot (\boldsymbol{C} \times \boldsymbol{D}) = (\boldsymbol{A} \cdot \boldsymbol{C})(\boldsymbol{B} \cdot \boldsymbol{D}) - (\boldsymbol{A} \cdot \boldsymbol{D})(\boldsymbol{B} \cdot \boldsymbol{C})$

(vector quadruple product) $\quad (\boldsymbol{A} \times \boldsymbol{B}) \times (\boldsymbol{C} \times \boldsymbol{D}) = ((\boldsymbol{A} \times \boldsymbol{B}) \cdot \boldsymbol{D})\boldsymbol{C} - ((\boldsymbol{A} \times \boldsymbol{B}) \cdot \boldsymbol{C})\boldsymbol{D}$

✓ **Completed**

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