Vector algebra

Using SciLab as a vector calculator - suggested problems

P1: Let
\[ u = <1, 2, 3> \quad v = <-1, 0, -5> \quad w = <10, -10, 4> \]

Use SciLab to compute

(a) \( u \cdot (v \times w) \)

(b) \( ||v \times (w \times u)|| \)

(c) \( \frac{u \cdot v}{||u \times v||} (u \times v) \)

(This will check your solutions to the previous problems in “Summary of operations.”)

P2: Using the same vectors as above, compute

\[ u \times (v \times w) \]

and

\[ (u \times v) \times w \]

What can you conclude about the vector cross product - does the associative property hold?