2024-12-17 U.N.

What is the meet (outer product) between two lines a & b? Here, the lines are in 2D

$$a \wedge b = (a.e_1 + a.e_2 + a.e_0) \wedge (b.e_1 + b.e_2 + b.e_0)$$

$$= a.e_1 \wedge b.e_2 + a.e_1 \wedge b.e_0$$
$$+ a.e_2 \wedge b.e_1 + a.e_2 \wedge b.e_0$$
$$+ a.e_0 \wedge b.e_1 + a.e_0 \wedge b.e_2$$

Grouping terms we have:

$$e_{20} \Rightarrow a.e_2 \wedge b.e_0 - b.e_2 \wedge a.e_0$$

$$e_{01} \Rightarrow -b.e_0 \wedge a.e_1 + a.e_0 \wedge b.e_1$$

$$e_{12} \Rightarrow a.e_1 \wedge b.e_2 - b.e_1 \wedge a.e_2$$