Apparently if you multiply two planes you get the line where they meet. I shld figure out the

plane × plane result

$(p1.e0 + p1.e1 + p1.e2 + p1.e3)$
$\times (p2.e0 + p2.e1 + p2.e2 + p2.e3)$

$= (p1.e0)(p2.e1)e01 + (p1.e0)(p2.e2)e02$
$+ (p1.e0)(p2.e3)e03$
$+ (p1.e1)(p2.e0) - (e01) + (p1.e1)(p2e1)$ REAL
$+ (p1.e1)(p2.e2)e12 + (p1.e1)(p2.e3) - (e31)$
$+ (p1.e2)(p2.e0)(-e01) + (p1.e2)(p2.e1)(-e12)$
$+ (p1.e2)(p2.e2)$ REAL $+ (p1.e2)(p2.e3)e23$
$+ (p1.e3)(p2.e0)(-e03) + (p1.e3)(p2.e1)e31$
$+ (p1.e3)(p2.e2)(-e23) + (p1.e3)(p2.e3)$ REAL

Let's group em up

REAL $(p1.e1)(p2.e1) + (p1.e2)(p2.e2) + (p1.e3)(p2.e3)$

e12 $(p1.e1)(p2.e2) - (p1.e2)(p2.e1)$

e31 $(p1.e3)(p2.e1) - (p1.e1)(p2.e3)$

e23 $(p1.e2)(p2.e3) - (p1.e3)(p2.e2)$

e01 $(p1.e0)(p2.e1) - (p1.e1)(p2.e0)$

e02 $(p1.e0)(p2.e2) - (p1.e2)(p2.e0)$

e03 $(p1.e0)(p2.e3) - (p1.e3)(p2.e0)$

e0123 0