And howabout the other way round point × dual quat

$= (p.e_{032} + p.e_{013} + p.e_{021} + p.e_{123}) \times$

$(q.w + q.e_{12} + q.e_{31} + q.e_{23} + q.e_{01} + q.e_{02} + q.e_{03} + q.e_{0123})$

Looking at my scribbles on the previous page it looks like

e_0 PART $+ (p.e_{021})(q.e_{12}) + (p.e_{013})(q.e_{31}) + (p.e_{032})(q.e_{23})$
$+ (p.e_{123})(q.e_{0123})$

e_1 $- (p.e_{123})(q.e_{23})$ e_2 $- (p.e_{123})(q.e_{31})$

e_3 $- (p.e_{123})(q.e_{12})$

e_{032} PART $- (p.e_{013})(q.e_{12}) + (p.e_{021})(q.e_{31}) + (p.e_{123})(q.e_{01})$
$+ (p.e_{032})(q.w)$

e_{013} PART $+ (p.e_{032})(q.e_{12}) - (p.e_{021})(q.e_{23}) + (p.e_{123})(q.e_{02})$
$+ (p.e_{013})(q.w)$

e_{021} PART $- (p.e_{032})(q.e_{31}) + (p.e_{013})(q.e_{23}) + (p.e_{123})(q.e_{03})$
$+ (p.e_{021})(q.w)$

e_{123} PART $+ (p.e_{0123})(q.w)$

So the only differences between dq × p and p × dq are the flipped signs highlighted in orange

Alright let's code it and see if it can rotate & translate a point

Wow a dual quat × point = flector. Thats why I have plane parts (e_0, e_1, e_2, e_3) in my derivation. Means I need to know how to multiply a plane by a quat