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0.1 Exterior (Grassman) algebra

The exterior algebra is the algebra generated by the wedge product.

The term $u \wedge v$ can be interpreted as the area covered by the parallelogram generated by u and v.

As $a\mathbf{u} \wedge b\mathbf{v} = ab\mathbf{u} \wedge \mathbf{v}$, we can see that scaling the length of one of the vectors by a scalar, we also increase the exterior product by the same scalar.

0.2 Orientation

We can describe the exterior product of two vectors as $\mathbf{u} \wedge \mathbf{v}$ or $\mathbf{v} \wedge \mathbf{u}$.