1163-16-630 **Tevian Dray*** (tevian@math.oregonstate.edu), Department of Mathematics, Oregon State University, Corvallis, OR 97330, and **Corinne A. Manogue** and **Isabella Johnson**. *A visual description of quaternionic multiplication and* $\mathfrak{so}(4)$.

The rotation groups $SO(n)$ are generated by rotations in every pair of planes in $\mathbb{R}^n$. The unitary groups $SU(n) \subset SO(2n)$ can be interpreted as correlated rotations of pairs of planes in $\mathbb{R}^{2n}$. We describe a graphical representation of these rotations at the Lie algebra level, culminating in the well-known decomposition $\mathfrak{so}(4) = \mathfrak{su}(2) + \mathfrak{su}(2)$, expressed in terms of quaternionic multiplication. Our results are not new, but their presentation is somewhat nontraditional. (Received September 10, 2020)