Section 1.5: Quaternion Group

Juan Patricio Carrizales Torres

May 19, 2023

The quaternion group is the set $Q_8 = \{1, -1, i, -i, j, -j, k, -k\}$ with product $\cdot$ computed as follows:

$$1 \cdot a = a \cdot 1 = a, (-1) \cdot (-1) = 1, \qquad (-1) \cdot a = a \cdot (-1), \forall a \in Q_8$$