

Simple construction of Hopf fibration with Cabri 3D and visualization of multiplication of unit quaternions

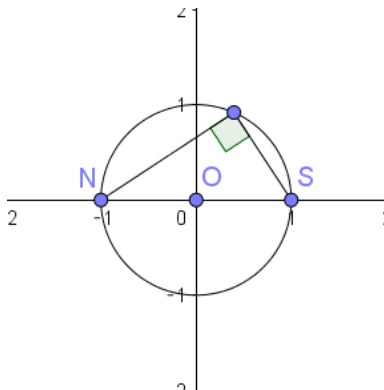
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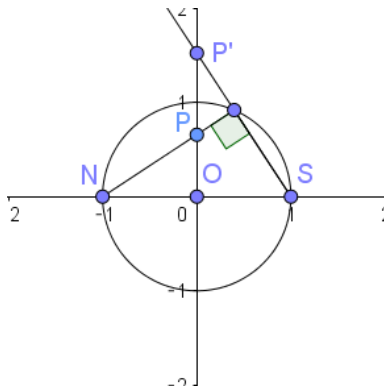
29th, June, 2018

inversion and stereographic projection

circle & right angle

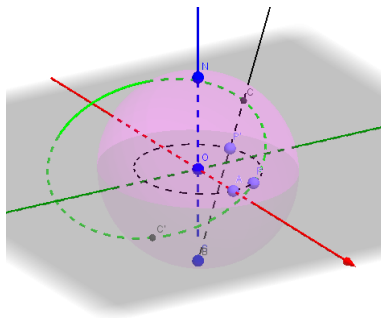


S.P. & inversion

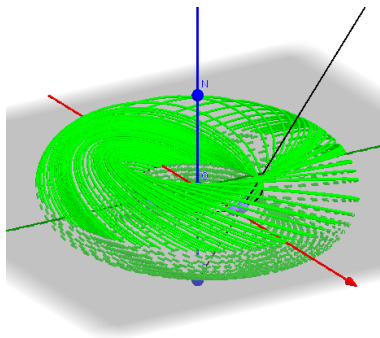


Hopf fibration and Clifford torus

Hopf fibration in S^3

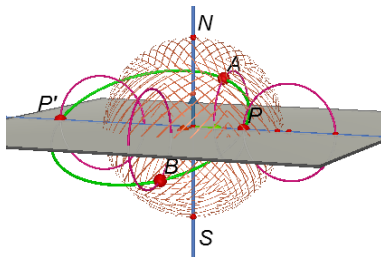


Clifford torus

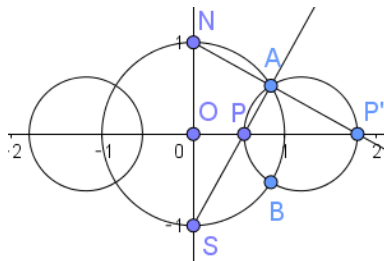


Construction of Hopf fibration

Idea

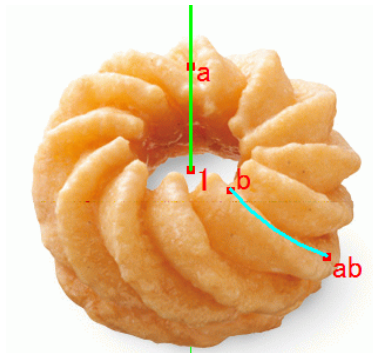


90 degree rotation

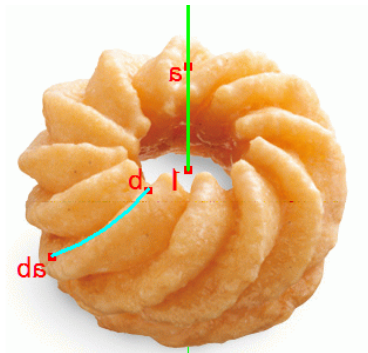


visualization of multiplication of unit quaternions

ab



ba



GeoGebra & Cabri 3D

Request of commands for Geogebra 3D:

1. inversion with respect to the sphere
2. rotation in space defined by an axis and two points

