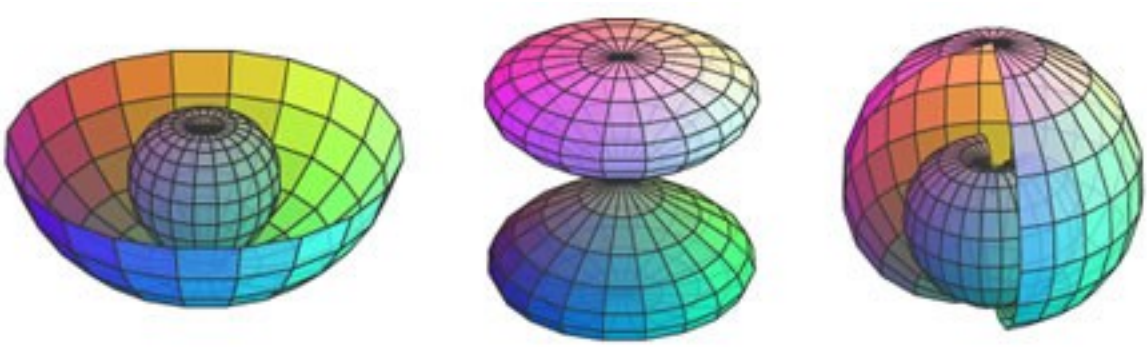
MAT 180: Surfaces



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Prerequisites: MAT 25 or MAT 67 or MAT 141.

Course objective: We consider the examples of the sphere, the torus, the Moebius band, the Klein bottle and others. In order to understand what these examples have in common, we must make sense of the notion of dimension. We compare and contrast notions of dimension, both integral and fractal. This allows us to formulate the definition of a surface. We then consider structures that enable a classification of surfaces: Triangulations, Euler characteristic, orientations. Finally, we test our knowledge of this classification.