Title: Curvature and the Gauss-Bonnet Theorem

Abstract: In high school we learn that two circles are considered to be the same (congruent) if they have the same radius, but when are two curves considered to be the same? One way to compare curves is to measure how much they bend at each point, and this measurement is called curvature. In fact, this notion of curvature can also be extended to surfaces. We will explain what curvature is and an important result involving curvature known as the Gauss-Bonnet theorem, which tells us that the local measurement of curvature on a surface puts a constraint on some global properties of the surface.

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\int K(\text{dolphin}) = \int K(\text{cow}) = \int K(\text{sphere}) = 4\pi
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