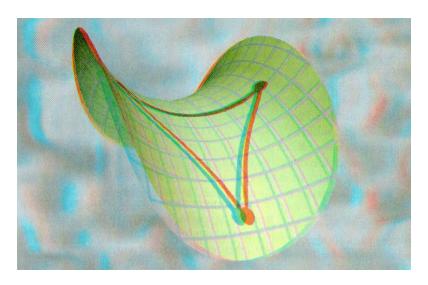# HOMEWORK 4

Question 1

In class you have worked on identifying the properties of triangles drawn on a spherical surface. You noticed that triangles on spheres are very different from the flat triangles that you previously encountered in your math classes. As part of your homework for this week, we want you to explore a triangle on a surface such as the one shown in the picture below.

The shape you see in the picture is a "saddle". A horse-saddle or a "Pringle" potato chip would be real life instances of such a shape. As part of the assignment find a saddle shaped object and carefully draw a triangle on it. Then please do the following:

1. Find the sum of all interior angles in this triangle.
2. Generalize your result. Explore the general properties of ANY triangle on a saddle. This is an open ended assignment. Give us as much information as possible. Use the exercise done in the class to guide you.
3. Based on your explorations of geometry so far, what can you infer about the properties of triangles? Explain your answer clearly.