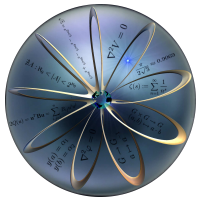

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biangle

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In spherical geometry, it is possible to form a polygon with only two sides. Thus, we have the following definition:

A *biangle* is a two-sided polygon that is strictly contained in one hemisphere of the sphere that is serving as the model for spherical geometry.

Given a biangle, its vertices must be antipodal points, and its two angles must be congruent. Therefore, every biangle is equiangular. Since each side of a biangle is half of a great circle, every biangle is equilateral. Hence, every biangle is regular.

Let θ be the radian `http://planetmath.org/AngleMeasure`measure of each angle of a biangle. Then the biangle `http://planetmath.org/Cover`covers $\frac{\theta}{2\pi}$ of the sphere. Since the area of the sphere is 4π, the area of the biangle is 2θ. Note that this equals the angle sum of the biangle.