Spheres

1. Explain in your own words what a geodesic is.

2. Answer each of the following:

How many geodesic paths are between two points in a plane?	How many geodesic paths are between the 'north pole' & 'south pole' on a sphere?

3. Given a geodesic on a sphere, find a (patty paper) technique to make another geodesic perpendicular to the given one. Explain your steps clearly.

4. Answer each of the following:

How many times do two perpendicular geodesics intersect in the plane?	How many times to two perpendicular geodesics intersect on the sphere?
If two geodesics are perpendicular on a plane, how many 90° angles are made?	If two geodesics are perpendicular on a sphere, how many 90° angles are made?