Exercise sheet 7

Curves and Surfaces, MTH201 $\,$

- 1. Compute the principal curvatures of a plane and a sphere.
- 2. Show that if the second fundamental form is 0 at each point then the image of the surface patch must lie on a plane.
- 3. Show that if the two principal curvatures of a surface are the same, then the surface lies on a plane or a sphere.