MAT402 HW6

These are practice problems.

Problem 1. Show that if E is a fiber bundle over a 1-manifold M, then every connection on E is flat.

Problem 2. Show that the trivial connection on a trivial bundle $E = M \times F$ is flat.

Problem 3. Show that the Poincaré half-plane has constant Gaussian curvature $K = -1$.