PROBLEM SET 3

Problem 1. Show that the antipodal map on $\mathbb{S}^2$ is the only *nontrivial* glide reflection that maps more than one line onto itself.

Problem 2. Show that a reflection of $\mathbb{S}^2$ induces a rotation of $\mathbb{RP}^2$ through π.

Problem 3. Show that two spherical triangles with the same angles are isometric.