

Math 331Z Writing assignment Spring '12

This assignment is due Wednesday April 11, 2012. Please do come to office hours to discuss the assignment.

1. The pons asinorum says that given a triangle $\triangle ABC$ with $AB = AC$, then the angles $\angle ABC$ and $\angle ACB$ have equal measure. Give a proof of this using the Euclidean axioms and another proof using isometries. Which is easier and why? The isometry proof should not use the side-angle-side or side-side-side theorem.
2. Do the same for the side-side-side theorem.
3. Give a proof that the sum of the angles in a triangle is π . How does this use the parallel postulate?