

Math 113-40, Mr. Church, Homework 1

Please staple your homework.

Part A: due at the beginning of class on Monday, January 11.

1. Given a symmetry of the triangle, how can you tell from the labeling whether it is a rotation or a reflection?
2. Exercise 11.1.

Part B: due at the beginning of class on Wednesday, January 13.

3. We saw[/will have seen] in class on Monday that performing one reflection followed by another reflection gives a rotation. What is the angle of the resulting rotation? What information about the two reflections is necessary to answer this question? What information about the reflections is irrelevant?
4. In the group of symmetries of the square:
 - (a) Do the reflections, together with the identity, form a subgroup? Explain why or why not.
 - (b) Do the rotations, together with the identity, form a subgroup? Explain why or why not.
5. Exercise 11.8.