

For each of the challenge problems on Handout #2, answer the following questions:

- (a) Write the problem and the answer, and explain how you arrived at your answer in sufficient detail to convince someone who has completed a good high-school geometry course.
- (b) Make a list of all mathematical facts (definitions, axioms, theorems, etc.) that you needed to use in arriving at the answer. Separate the list into two parts: facts about *geometry*, and facts about *numbers*.
- (c) For each of the *geometric* facts in your list, try to describe as carefully as possible how you know it is true.