

Handout #4 (10/28/05)

How to Assess Your Classmates' Writing Assignments

You don't need to give a grade, or to correct every error you see. Try to focus on the most important things you notice about the paper, and make constructive comments that will help the writer improve the next draft. You should try to base your comments on the following three criteria.

- **Mathematical Correctness:**

- Does every mathematical sentence have a precise mathematical meaning?
- If some sentences are meant to convey intuition (rather than mathematical precision), are they clearly delineated as such?
- Does every step follow logically from the preceding ones?
- Is the justification for each step clear? (This could mean that the justification is clearly stated, or that it is so obvious that it does not need to be stated.)
- Is every variable either appropriately quantified or clearly defined in terms of other well-defined objects, *before* it is used?
- If previous results are used, are they clearly stated? Are references given when needed? Does the author make it clear that the hypotheses are satisfied and why?

- **Exposition:**

- Is the main result clearly and precisely stated, with its proof clearly delineated?
- Is the proof organized clearly into sentences and paragraphs? Are the sentences clear and easy to understand? Are they not too long or too convoluted or too short?
- Is the overall structure of the proof clear (e.g., whether it's a direct proof, indirect proof, contrapositive proof, proof by cases)?
- Is the proof written at the right level for the intended audience (other students with similar background, but who don't necessarily know this result or its proof)?
- Are there clear transitions from one step to the next?
- If formulas are used, are they appropriately interspersed with clarifying text so that they're easy to read and place in context?

- **Conventions:**

- Are the grammar, spelling, punctuation, and usage correct?
- Are mathematical writing conventions followed correctly?
- Are symbols and formulas used correctly, with every formula playing a grammatical role as part of a complete sentence?
- Are too many symbols used where English-language descriptions would have been clearer? Conversely, are cumbersome descriptions used where a few well-chosen symbols would have been clearer?