

Rubric Assignment 9: due Nov. 5

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Rubric-Geometry to Algebra

This is the grading rubric for the assignment due Nov. 5. It is Homework 9 on the website.

The problem gave a definition of ‘multiplication’ \otimes and ‘addition’ \oplus of equivalence classes of line segments. The assignment was to prove that \oplus is commutative, \otimes is associative, and \otimes distributes over \oplus . There were no numbers in the problem; no numbers should appear anywhere in the proof.

The following rubric categorizes the response. For almost all students, one category applies to the paper as whole. A few students did markedly different work on different problems and this is reflected in the marking. A major difficulty for a few people was lack of words. Proofs are written in English. Diagrams can illustrate but not replace a proof.

1. There was no indication of understanding the roles of algebra and geometry in the problem.
2. The response partially uses geometric arguments but eventually falls into thinking that length has been defined and one can manipulate numbers.
3. The geometric idea is understood pretty well but there are technical problems in the proof or it is not properly explained.
4. The geometrical arguments are carried out to solve the problem.

I have recorded these scores not as part of your grade but to tell me where the class is. I did however as part of the grade record those people who made a good faith effort.