

MATH 413 READING ASSIGNMENT 1

Nov 13, 2007

Answer the following questions. Your answer to each question should be at least a paragraph and no more than 2-3 pages. In particular, one-sentence answers are not sufficient. In grading your answers, I am primarily interested in seeing that you have carefully read the handout by Dr. Polya and you have thought about how it relates to your experiences as a mathematical problem solver.

This assignment counts for 5% of your grade in this class.

1. Do you think that you have been using some form of Dr. Polya's 4-phase approach to solving mathematical problems in the past? If yes, how did it benefit you? If not, why do you think you didn't.
2. How do you think that a student who does not understand the 4-phase approach would be disadvantaged compared with a student who does?
3. Find an example of a problem from this class and explain the 4 phases of solving this problem. (Your example could be a problem we solved in class or one from the homework.) Illustrate how you could encourage a student to use the 4-phase approach to solve this particular problem by making up potential conversations with a student similar to the ones in Dr. Polya's book. If you wish, you can ask one of your classmates to help you envision your role as a teacher by acting as a somewhat confused student.