

Math 219 Homework: 25 points

For each homework, four problems will be assigned. Each problem will be worth 5 points and will be graded as follows:

Originality (-5 to 0 points)

- (0 points) The solution is written in your own words with your ideas. If you worked in groups, this is clearly stated, and the ideas of other students are acknowledged.
- (-5 points) Your solution shares many aspects in common with the solution of another student.

Correctness (0 to 2 points)

- (2 points) The problem is understood and a correct solution is given.
- (0 points) The solution is not correct.

Explanation (0 to 3 points)

- (3 points) The explanation is detailed and correct.
- (2 points) The explanation is either detailed or correct but not both.
- (0 points) The explanation is neither detailed nor correct.

Complete Write-Up: 5 points

Choose one problem from your homework and in addition to writing a solution as described above, do a complete write-up of the solution. This write-up should include all of your thoughts on the problem, including your possibly incorrect thoughts. As an example of this, see *Chessboard Squares* on pages 19–22 and *Leapfrogs* on pages 57–61. Your solution should follow the rubric given in the text and include relevant buzzwords:

- Buzzwords from Chapter 1: **stuck**, **aha**, **check**, **reflect**, see pages 17–18 for more information; **specialize**, **generalize**, see page 24 for more information.
- Buzzwords from Chapter 2: **know**, **want**, **introduce**, see page 38 for more information.

Originality (-5 to 0 points)

- (0 points) The complete write-up is written in your own words with your ideas. If you worked in groups, this is clearly stated, and the ideas of other students are acknowledged.
- (-5 points) Your work shares many aspects in common with the work of another student.

Complete Write-Up (0 to 5 points)

- (5 points) Your work shows serious consideration of the thought process used to arrive at the solution. In particular, the rubric given in the text is followed, along with the appropriate buzzwords.
- (3 points) Your work shows a serious consideration of the thought process or a basic adherence to the rubric given in the relevant chapters but not both.
- (0 points) Your work shows neither serious consideration of the thought process nor an adherence to the rubric given in the relevant chapters.

Scratch Work: Your Problem Solving Journal

When trying to solve a difficult problem, one needs scratch work. When working on the homework problems, you should essentially do the homework *twice*. The first time you should do a “quick-and-dirty” version of your homework. This should be done in your *Problem Solving Journal*. Work in pen—keep a record of all your ideas. After you have solved the problem you should **rewrite** your homework as a neat, understandable, write-up.