

# Homework 2 Grading Rubric

MCS 401 Summer 2015

There were 116 points possible - 31 based on completeness, 80 based on correctness, and 5 based on me being able to navigate what you turned in - but making over 100 points was not allowed.

## 1 Check Marks (31 points possible)

Check marks mean that you attempted a part of a problem, not that you did it correctly. Sorry for any confusion this causes.

I considered attempting each separate part of a given problem as one point. Exercise 3.2-3 has 3 parts, Exercise 3.2-4 has 2, Exercise 4.5-1 has 4, Exercise 4.5-4 has 2, Problem 4.1 has 7, Problem 4.3 has 2, and all others counted as 1.

## 2 Graded Problems (80 points possible)

I graded 6 of the problems based on correctness, 4 were worth 10 points each and 2 were worth 20 points each.

### Exercise 3.2-2 (10 points)

- (0 points) missing or proved wrong thing
- (8 points) correct, but written in the wrong direction with the statement that needed to be proven written first as an assumption and a true statement being put down last as the conclusion
- (10 points) completely correct

### First Part of Exercise 3.2-4 (10 points)

- (0 points) missing

- (3 points) an attempt was made
- (8 points) the right idea was used, but proof lacked important steps
- (10 points) correct solution

**Exercise 4.3-1 (10 points)**

- (0 points) missing or proof didn't make sense
- (5 points) the correct induction step happened but was not explained or did not fit in to any kind of proof
- (10 points) either a correct proof using substitution was given or an inductive bound proof was attempted and the induction step was correct and made sense in the context of the proof though there may have been other flaws

**Exercise 4.4-2 (10 points)**

- (0 points) missing or not correct
- (8 points) induction step not complete
- (10 points) correct solution

**Exercise 4.5-1 (20 points)**

- 5 points for each part correct and explained
- -1 point for not proving the extra condition in case 3

**Exercise 4.5-4 (20 points)**

- 10 points for correctly stating why the theorem doesn't apply (5 points for answering correctly without giving a reason)
- 10 points for finding a correct bound with some backing reason (5 points for work done towards answering this part)

**3 Presentation Bonus (+5 points possible)**

I gave an extra 5 points to some people as a thank you for turning in something that was easy to grade. These assignments had somewhat ok handwriting or were typed, the problem numbers were not hidden underneath the staple, and, most importantly, the problems were in sequence. So thanks to those of you who did that!