

## MA/CS415 Homework #6

Due Wednesday, October 20

1. You may rework any of your exam answers to earn back up to half of the points lost. So, for example, if you scored 4 out of 10 points on a question, correctly answering the question will earn you an additional 3 points. Write up your corrected answers separately from the exam (do NOT write on the exam itself), and then turn in both the old exam and the new answers.
2. Page 58–9, #1.
3. Page 60, #8.
4. Page 77, #8.
5. Page 79, #4.
6. Consider a large cube composed of  $5 \times 5 \times 5$  smaller cubes. Construct a graph by placing a vertex inside each of the 125 cubes and joining two vertices by an edge if the corresponding cubes are adjacent. Find a simple argument that the resulting graph is not Hamiltonian.