EXTRA.

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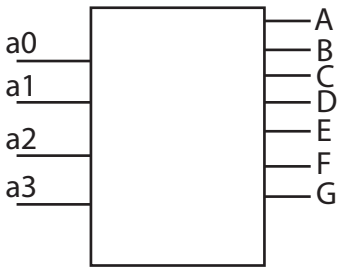
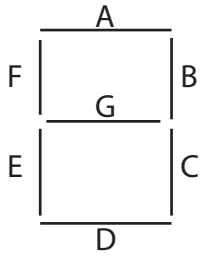
The objective for this extra credit opporunity is to target certain topic areas that you might need additional practice with. For your midterm exam, choose no more than 2 of the problems that you were weakest on. For each problem that you chose, lookup from the following correspondence list and do the **even** problems. For instance, if you scored low on Problem 4 on the midterm, you can answer the even questions 10–40 in the Rosen book from Chapter 1.4. You have the potential of adding 20 points on your midterm, capped to a maximum of 100%. Please typeset, print, and submit your answer sheet on the due date to the instructor.

1. Problem 1: Propositional Logic - Chapter 1.1 problems 10–40
2. Problem 2: Digital Logic - Chapter 1.2





   Create a digital circuit that uses only NOT, AND, XOR, and OR gates to take as input a 4 bit number a_3, a_2, a_1, a_0 and return a calculator-like display by lighting up the A, B, C, D, E, F, G lights on the display to represent that single digit.

3. Problem 3: Propositional Equivalences - Chapter 1.3 problems 10–40
4. Problem 4: Predicates and Quantifiers - Chapter 1.4 problems 10–40
5. Problem 5: Rules of Inference - Chapter 1.6 problems 10–40
6. Problem 6: Proofs - Chapter 1.7 problems 1–20
7. Problem 7: Proofs - Chapter 1.7 problems 22–42
8. Problem 8: Sets - Chapter 2.1 problems 10–40
9. Problem 9: Set Operations - Chapter 2.2 problems 10–40
10. Problem 10: Functions - Chapter 2.3 problems 10–40
11. Problem 11: Sequences and Summations - Chapter 2.4 problems 10–40
12. Problem 12: Puzzle - Chapter 1.2 20–36