## **CS 240 Spring 2017**

Assignment 1 Entrance Gates (40 points)	Name:	
1. (2 points)		
2. (2 points)		
3. (6 points)		
F2 =		
F1 =		
A B C   F2 F1		

1 1 0 |

|

1 1 1 |

4. (6 points)

4a. [2/6 points]

4b. [2/6 points]

4c. [2/6 points]

5. (2 points)

6. (5 points)

7. (8 points)

There are many ways to arrive at the final answers. It is clearest to take one reduction step at a time, using one law per step.

7a. [1/8 points]

expression

(A+B)(A+B')

law used for reduction

7b. [3/8 points]

expression ABC + A'B + ABC' law used for reduction

7c. [3/8 points]

expression A'B' + A'BC' + (A + C')'

law used for reduction

7d. [1/8 points]

expression law A'B'C'D' + AB'C' + AB'CD' + ABD + A'B'CD' + BC'D + A' law used for reduction

8. (3 points)

8a. [.5/3]

8b. [.5/3]

8c. [1/3]

8d. [1/3]

9. (6 points)