1. [10 points] Problem 4-25 (page 178).

2. [10 points] Problem 4-28 (page 178).

3. [10 points] Problem 4-31 (page 179)

4. [10 points] Using a combination of four half or full adders (choose the combination as needed):
(a) [5 points] Design a four-bit incrementer circuit (a circuit that adds 1 to a four-bit binary number).
(b) [5 points] Design a four-bit decrementer circuit (a circuit that subtracts 1 from a four-bit binary number).
In both cases, numbers are represented in 2’s complement form.
**Hint:** Consider how addition and subtraction are performed for numbers in 2’s complement.

**Extra credit:**
1. [10 points] Problem 4-35 (only part (b)) (page 179).