Homework Assignment 1

1. **Exercise 2.2−2** The answer to this problem goes here.

Algorithm 1 Selection Sort Pseudocode

Input: $\mathbf{x} = x_1, x_2, \ldots, x_N$
Output: $EvenSum$ (Sum of even numbers in $\mathbf{x}$)

```
1: function EvenSummation(x)
2:     EvenSum ← 0
3:     N ← length(x)
4:     for i ← 1 to N do
5:         if x_i mod 2 == 0 then                ▷ check if a number is even?
6:             EvenSum ← EvenSum + x_i
7:         end if
8:     end for
9:     return EvenSum
10: end function
```

2. **Exercise 2.3−3**
3. **Problem 2−3**
4. **Prove or disprove** $f(n) + g(n) = \Theta(\max(f(n), g(n)))$
5. **Problem 3.3a**
6. **Exercise 4.1−5**
7. **Exercise 4.2−4**
8. **Exercise 4.3−7**
9. **Exercise 4.4−9**
10. **Problem 4.3bfhj**