

# Worksheet 13 Solution

March 22, 2020

## Question 1

- a. **Exact number of iterations:**  $n$   
**Simplest theta expression:**  $f_1 \in \Theta(n)$
- b. **Exact number of iterations:**  $n - 4$   
**Simplest theta expression:**  $f_2 \in \Theta(n)$
- c. **Exact number of iterations:**  $n$   
**Simplest theta expression:**  $f_3 \in \Theta(n)$
- d. **Exact number of iterations:**  $n^2 - 20$   
**Simplest theta expression:**  $f_4 \in \Theta(n^2)$
- e. **Exact number of iterations:**  $n^2 - 20 + n$   
**Simplest theta expression:**  $f_5 \in \Theta(n^2)$

## Question 2

## Question 3