University of Waterloo
CS240E, Winter 2021
Assignment 1 Post Mortem

Question 1   [1+2=3 marks]

- Generally well done.

Question 2   [7 marks]

- Most common reason students lost marks here was because they just stated without justification that mystery can't be $\Theta(n^2)$ because of how mystery behaves at even n. Though this is intuitive, it still must be proven.

Question 3   [2+6+4=12 marks]

- a) was well done.

- Some students thought it was sufficient to only give an upper bound for b).

- For c) some students mistakenly said the height was 3 because they counted three levels in the tree.

Question 4   [3+7=10 marks]

- Both generally well done.

Question 5   [1+1+2(+5) = 4(+5) marks]

- For a), there were some errors in counting the number of operations for *mystery(A, j, k)*.

- b) was well done. Some students gave the incorrect formula for geometric sum.

- c) was also well done. Most students chose $i = 0$ or $i = n - 1$ to get $T(n) \in T(n-1) + \Theta(n)$, which resolves to $\Theta(n^2)$.