University of Waterloo
CS240 Fall 2025
Assignment 2 Post-Mortem

Question 1   [5+5+5=15 marks]

- This question was generally well done.

- For part b, some students failed to perform heapify properly. Sometimes, the resulting heap did not even follow heap order property.

- For part c, some students only gave the heap after the second deletion. Students were required to provide heaps after each of the two deletions.

- For part c, some students failed to find the correct value of -12 in the third node of level 2.

Question 2   [10 marks]

- This question was very well done.

- Some students provided expressions instead of a simplified fraction for this question. No marks were deducted, but students should generally attempt to simply answers when possible.

- The most common value that students failed to find correctly was $P(8)$

Question 3   [10 marks]

- This question was very well done.

- Some students did not give a run-time analysis. When designing algorithms, you are expected to provide a run-time analysis.

- Some students provided an algorithm that did not treat A as an array of (key, element) pairs.

Question 4   [4+6=10 marks]

- This question was very well done.

- Some students provided a deterministic algorithm instead of a randomized algorithm.

Question 5 [6 marks]

- This question was very well done.