

University of Waterloo
CS240E, Winter 2024
Assignment 3 Post-Mortem

Question 1 [3+5=8 marks]

- part (b): many solutions returned the root node when $k = T.leftsize \pm 1$ instead of when $k = T.leftsize$.
- part (b): many solutions omitted important details, e.g. "recurse on the right child" misses recursion details that "return ScapegoatSelection(v.right, k - (sizeLeftTree + 1))" does not miss.

Question 2 [5 marks]

- No one got the bound $\lceil \log \log n \rceil + 2$. Most had a floor function.
- A common error was using some $n < 4$ for their induction base case

Question 3 [3 marks]

- this question was done well

Question 4 [3+3+8=14 marks]

- part (a): some solutions replaced keys with values entirely. This is not correct because values do not take constant time to compare.
- part (b): many solutions misinterpreted the question and only compared a BST to a vEBT.