Quiz 2
Question 1

• Suppose recursive mergesort is used to sort
  W H A R F M E O
  In the recursion tree, the left child of the root’s right child corresponds to (choose the best):
  - A: A R
  - B: F M
  - C: W H
  - D: E O
  - E: R F
Question 2

• Let $A$ be a correct comparison-based sorting algorithm. Choose the best statement.
  – A: For every input of size $N$, $A$ must make at least $N \log N$ comparisons
  – B: There exists an input of size $N$ for which $A$ makes at least $N \log N$ comparisons
  – C: For every input of size $N$, $A$ must make at most $N \log N$ comparisons
  – D: None of the above
Question 3

- A binary decision tree with $N$ nodes, $L$ leaves, and height $H$, must have (choose the best)
  - A: $N \geq 2^H$
  - B: $L \geq 2^H$
  - C: $L \leq 2^H$
  - D: $H \leq \log N$
  - E: None of the above