CSE110 Review Questions
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Searching

Question 1 Use the sorted list below and use binary search to look for Mike in the list. Show all the names that will be compared before Mike is found. Then, repeat the same process for Cathy (note: Cathy is not in the list).

Aaron   Betsy   Doug   Elise   Mike   Pat   Steven

Answers:
Searching for Mike: Elise, Pat, Mike → Found Mike
Searching for Cathy: Elise, Betsy, Doug → Did not find Cathy

Question 2 What is the benefit of using binary search over linear search? Answer: Binary search is better than linear search because at each iteration, binary search cuts the search size by half, whereas linear search reduces the search size by only 1.