Summer 2021 Algorithms and Analysis Tools Exam, Part A

2) (10 pts) ANL (Algorithm Analysis)

Querying a user in our data base of 10^4 users take 10 milliseconds. The runtime of the query is logarithmic with respect to the number of users. Namely, if there are n users, a query takes $O(\lg n)$ time. How many users can we support while taking no more than 20 milliseconds per query?
