Suppose that the replacement selection is applied to generate longer runs for N numbers with a priority queue of size M, the possible maximum length of the longest run is N.

○ T    ○ F

T

In general, for a 3-way merge we need 6 input buffers and 2 output buffers for decreasing the number of passes.

F

Given 1000 runs and 8 tapes. If simple $k$-way merge is used, the minimum number of passes required is 5 (runs generation pass is not counted).

◉ T    ○ F

T

To sort $N$ numbers by external sorting using a $k$-way merge and a $k$-size heap, which statement is TRUE about the total comparison times $T(N, k)$ and $k$?

○ A. $T(N, k)$ has nothing to do with $k$.

○ B. $T(N, k)$ is $O(k)$ for fixed $N$.

○ C. $T(N, k)$ is $O(k \log k)$ for fixed $N$.

◉ D. $T(N, k)$ is $O(k^2)$ for fixed $N$.

A replacement selection is applied to generate the max run with a priority queue of 5 records. When the sequence of numbers is { 11, 81, 17, 14, 94, 28, 35, X, …. } and the length of the first run is 7, what is the sufficient condition of X?

◉ A. less than 17

○ B. greater than 17

○ C. less than 35

○ D. less than 94

答案正确: 2 分    ○ 创建提问 ☑

A