操作系统(D)

第 11 次作业

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11.13 Suppose that a disk drive has 5,000 cylinders, numbered 0 to 4,999. The drive is currently serving a request at cylinder 2,150, and the previous request was at cylinder 1,805. The queue of pending requests, in FIFO order, is:

2,069; 1,212; 2,296; 2,800; 544; 1,618; 356; 1,523; 4,965; 3,681

Starting from the current head position, what is the total distance (in cylinders) that the disk arm moves to satisfy all the pending requests for each of the following disk-scheduling algorithms?

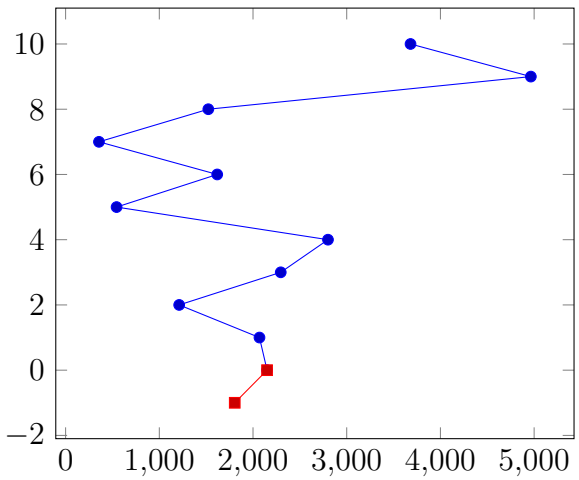
a. FCFS

b. SCAN

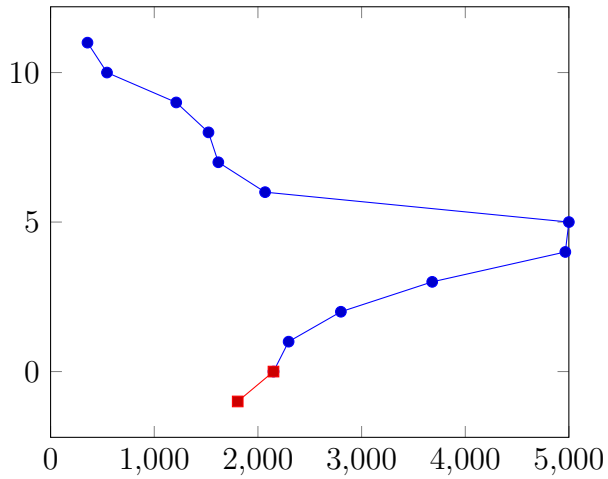
c. C-SCAN

解.

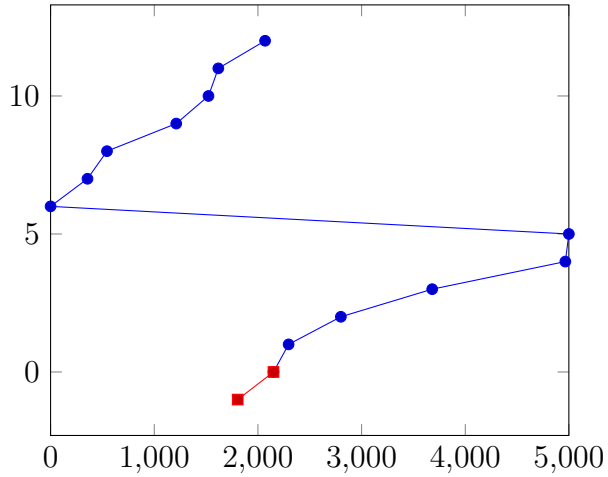
a. FCFS: 13011.



b. SCAN: 7492.



c. C-SCAN: 9917.



11.20 Consider a RAID level 5 organization comprising five disks, with the parity for sets of four blocks on four disks stored on the fifth disk. Howmany blocks are accessed in order to perform the following?

a. A write of one block of data

b. A write of seven continuous blocks of data

解.

a. 1+4=5.

b. 7+4×7=35.