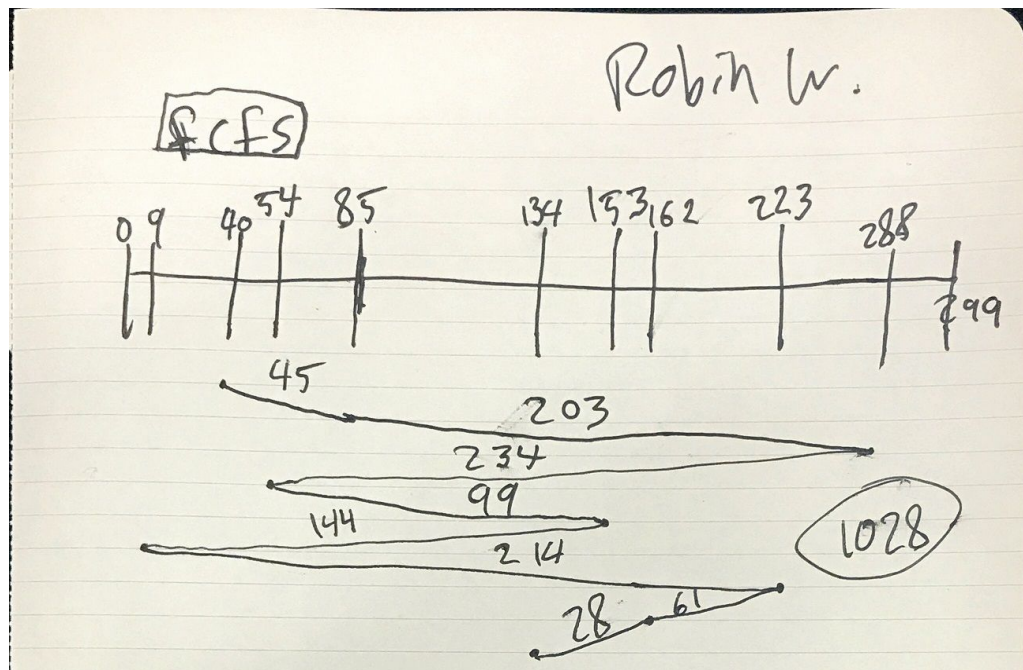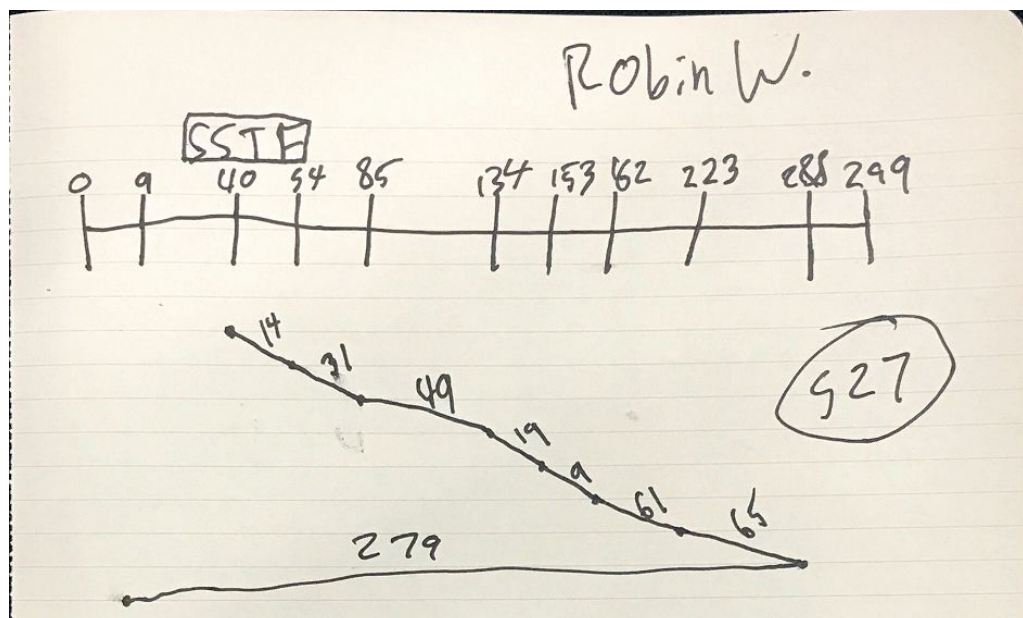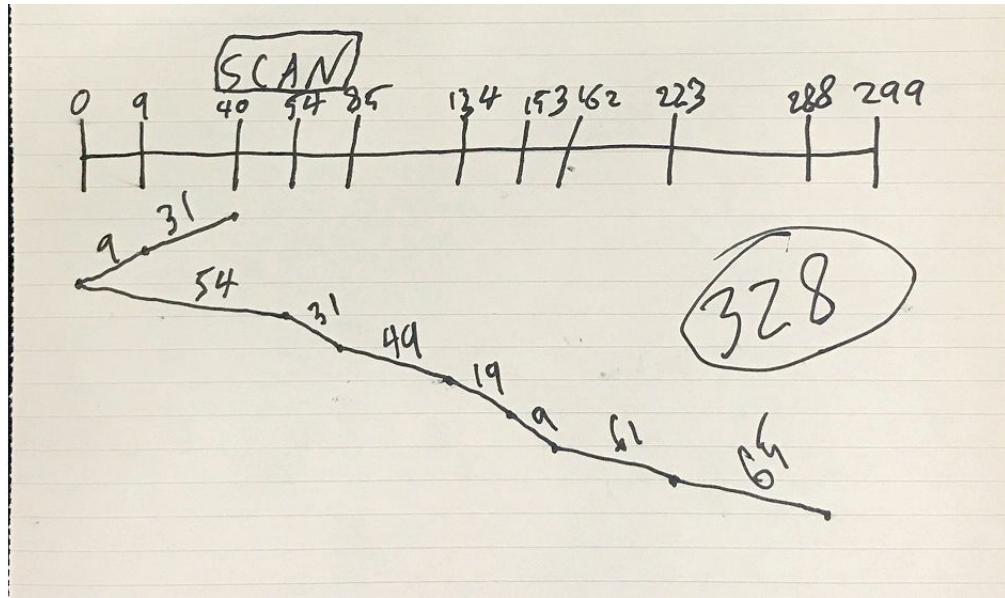Robin Ward
3/21/18
COMP 7506
Homework 2

1. SSTF would favor the middle cylinder over the innermost and outermost cylinders. This is because the head would only have to move one-half of the width.

2.

2.1.
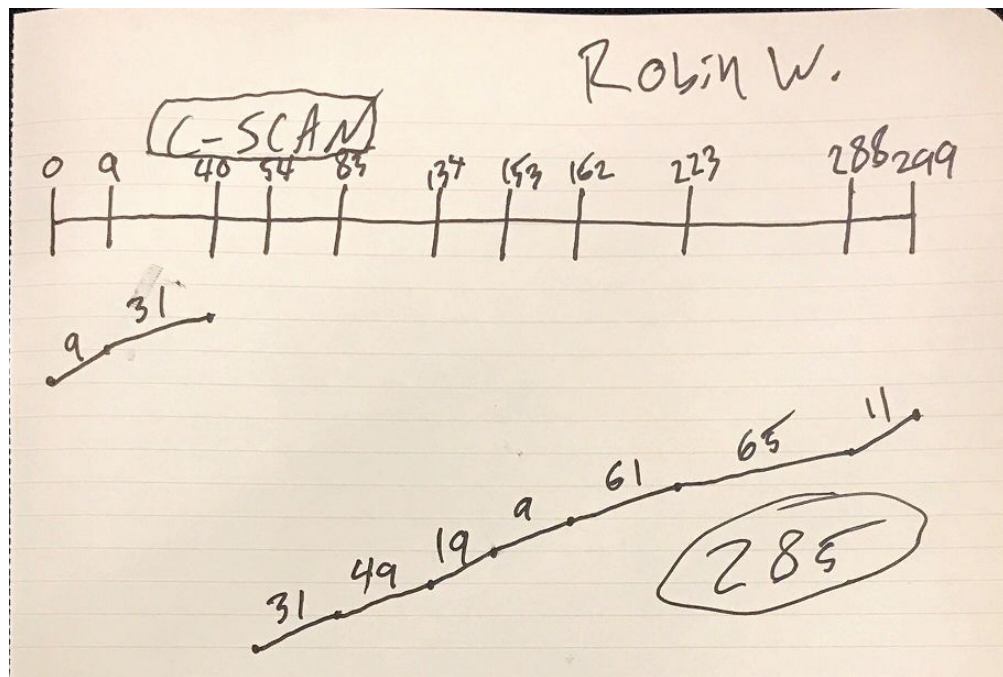

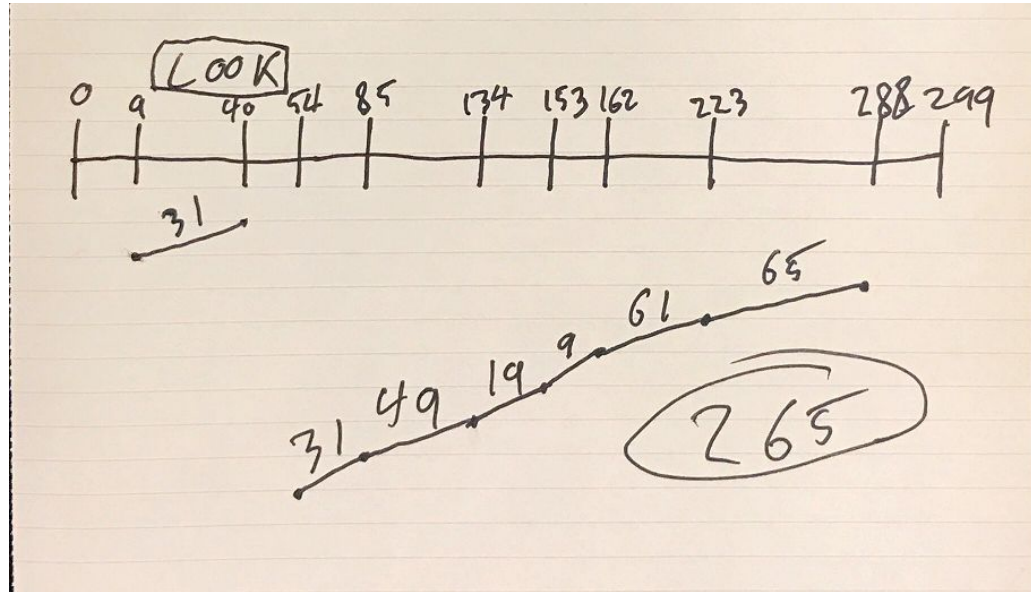
2.2.

2.3.

SCAN

0 9 40 54 85 134 153 162 223 288 299

9 31 54 31 49 19 9 61 64

328

2.4.

Robin W.

C-SCAN

0 9 40 54 85 134 153 162 223 288 299

9 31

31 49 19 9 61 65 11

285

2.5.

3.

 3.1. The RAID 0 has very fast read and write with no overhead for parity calculation. 100% of the disk is utilized.

 3.2. RAID 1 is superior in any situation where there is a huge need for mirroring. RAID 1 setups write to all of the drives, so if one goes down, the other will take its place until the drive is replaced. Then new data will be written to the new drive. Also, RAID 1 can be on the same read level of RAID 0 if the RAID controller uses multiplexing to read data from disks.

4. Rebuilding a RAID 5 database is very process intensive and takes a lot of time. All of the disks need to be accounted for when doing a rebuild as well. In RAID 5, the transaction also has to write to the parity disk, which creates a bottleneck.