习题课5/5: Disk scheduling

Question #1：课堂1题

- There is sequence of disk track requests:96 58 82 36 168 130 150 25 184.
- Assume that the disk head
  - is initially positioned over track 100
  - and is moving in the direction of increasing track number.
- Question: For FIFO/SSTF/SCAN/C-SCAN
  - What is the tracking order?
  - What is Average Track Length?

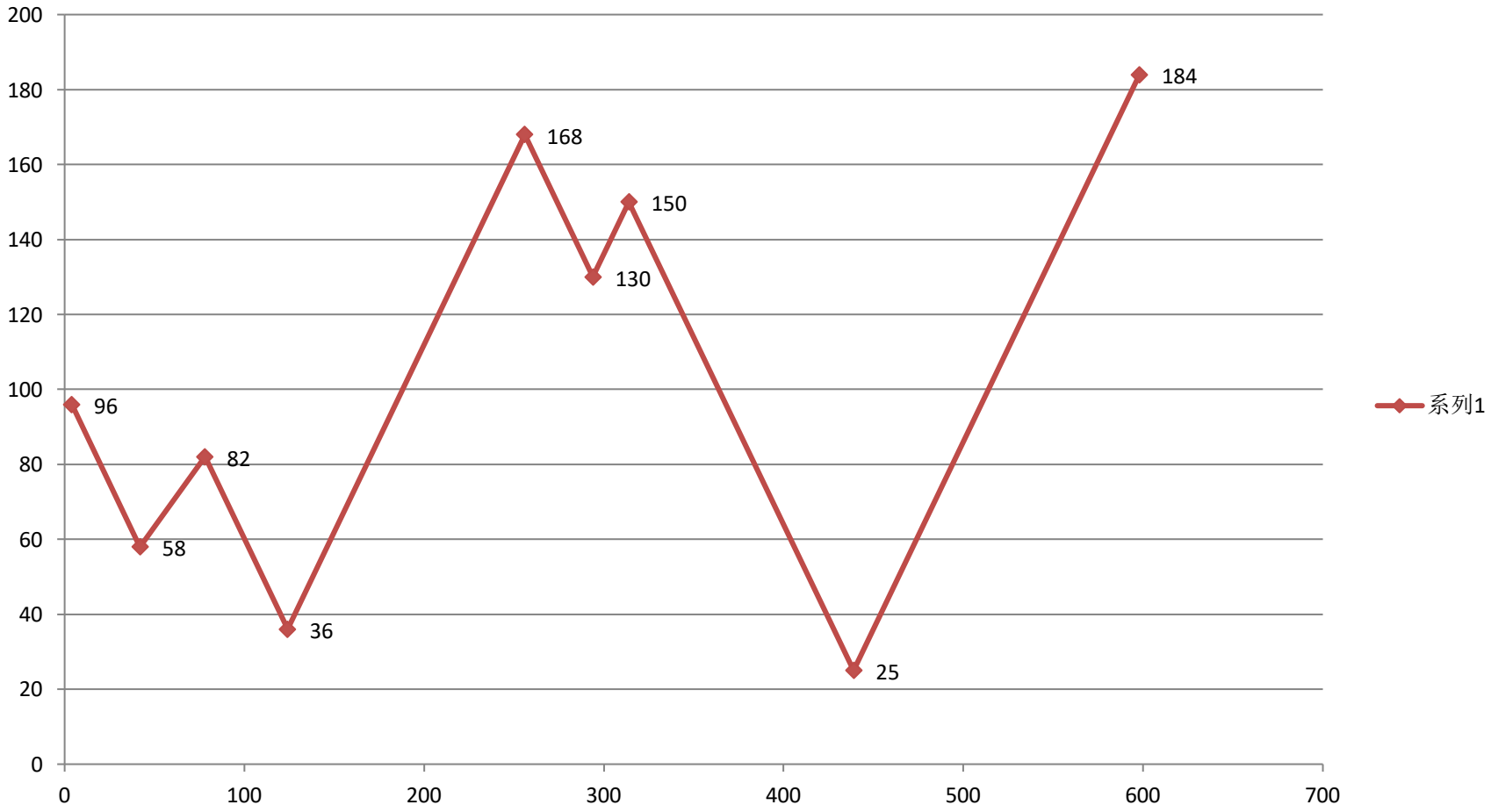
answer

FIFO		SSTF	
Next track accessed	**Number of tracks traversed**	**Next track accessed**	**Number of tracks traversed**
96	4	96	4
58	38	82	14
82	36	58	24
36	46	36	22
168	132	25	11
130	38	130	105
150	20	150	20
25	125	168	18
184	159	184	16
Average seek length	**66.4**	Average seek length	**26**

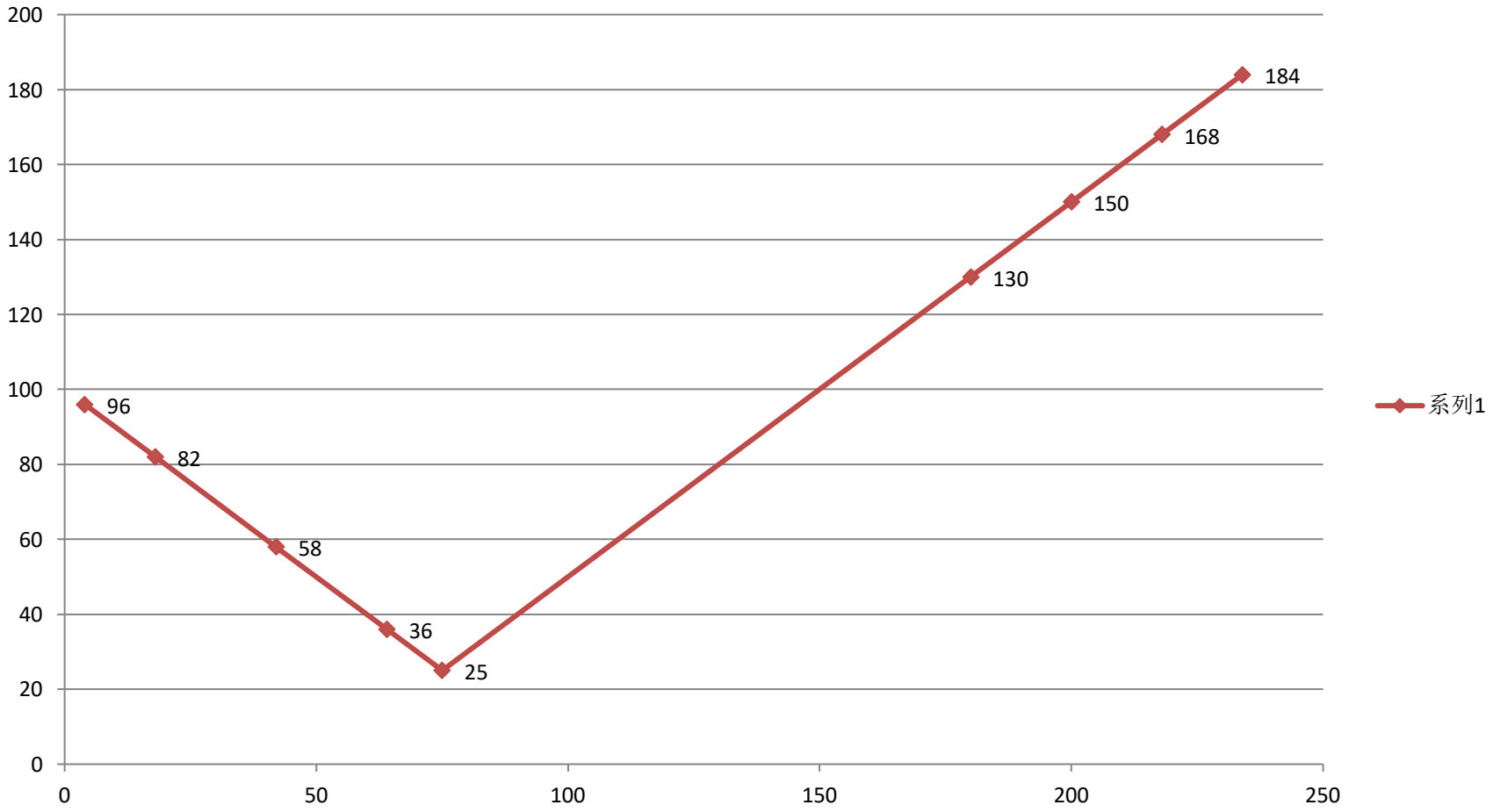
answer

SCAN		C-SCAN	
Next track accessed	**Number of tracks traversed**	**Next track accessed**	**Number of tracks traversed**
130	30	130	30
150	20	150	20
168	18	168	18
184	16	184	16
96	88	25	159
82	14	36	11
58	24	58	22
36	22	82	24
25	11	96	14
Average seek length	**25.7**	Average seek length	**34.9**

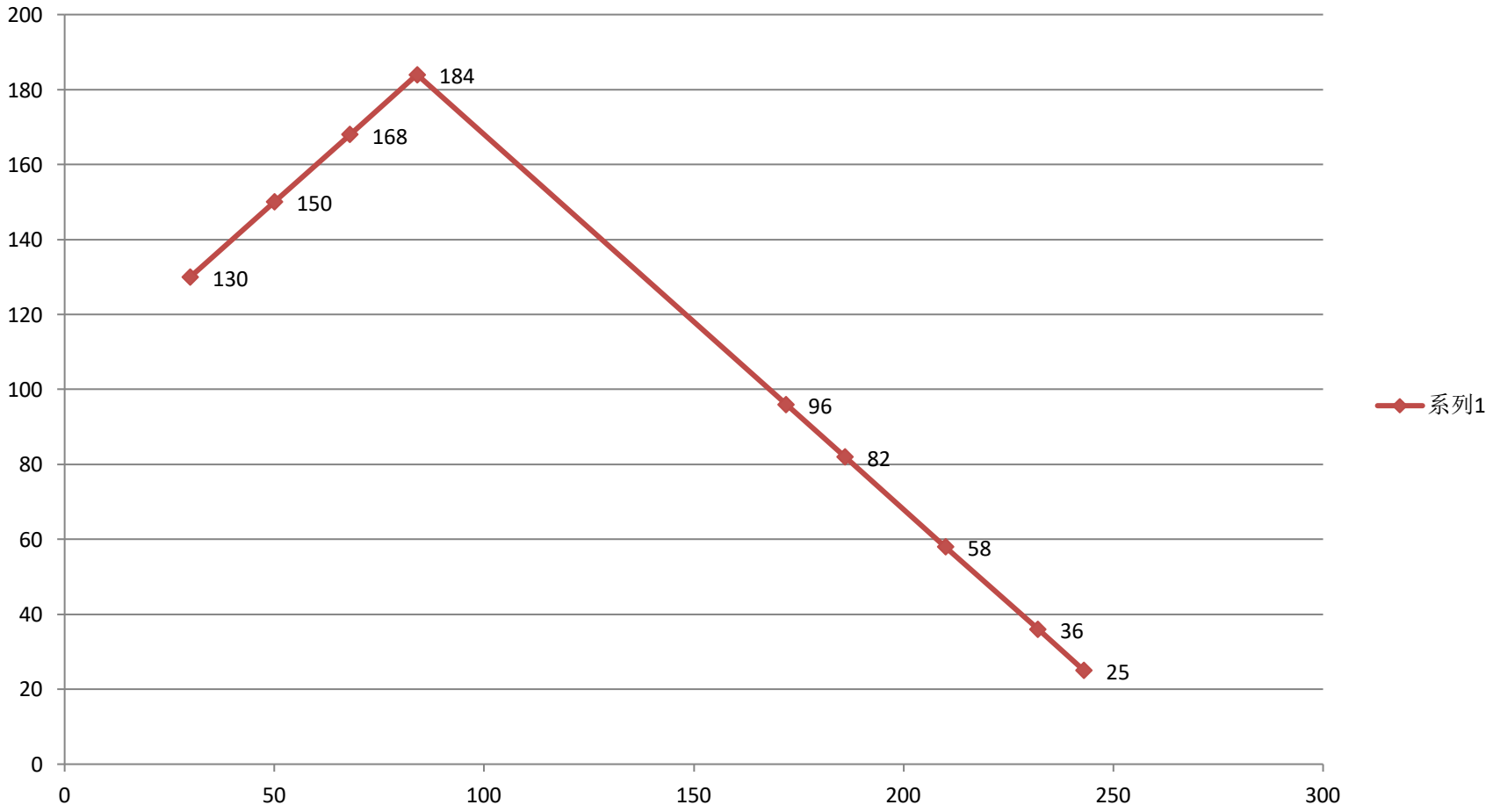
FIFO


200
180
160
140
120
100
80
60
40
20
0
0
100
200
300
400
500
600
700
96
58
82
36
168
130
150
25
184
系列1

SSTF


200
180
160
140
120
100
80
60
40
20
0
0
50
100
150
200
250
96
82
58
36
25
130
150
168
184
系列1

SCAN


200
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40
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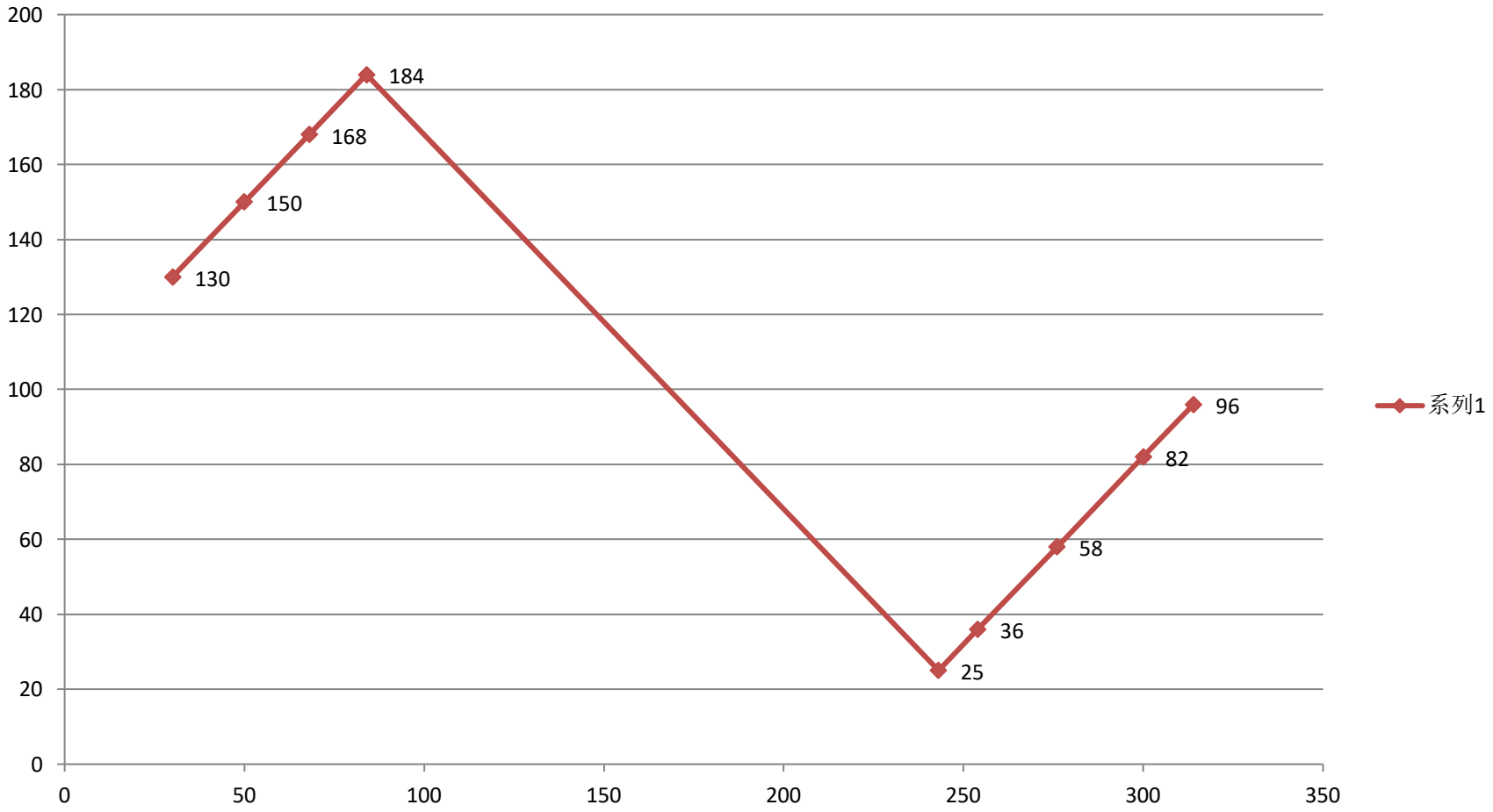
50
100
150
200
250
300
184
168
150
130
96
82
58
36
25
系列1

C-SCAN


200
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50
100
150
200
250
300
350
184
168
150
130
96
82
58
36
25
系列1

Question #2:

- There is sequence of disk track requests:75 62 99 144 50 162 110 26 198.
- Assume that the disk head
  - is initially positioned over track 100
  - and is moving in the direction of decreasing track number.
- Question: For FIFO/SSTF/SCAN/C-SCAN
  - What is the tracking order?
  - What is Average Track Length?