Magnetic/Hard Disk

(Track #, Surface #, Sector #)   "Physical" View of Disk
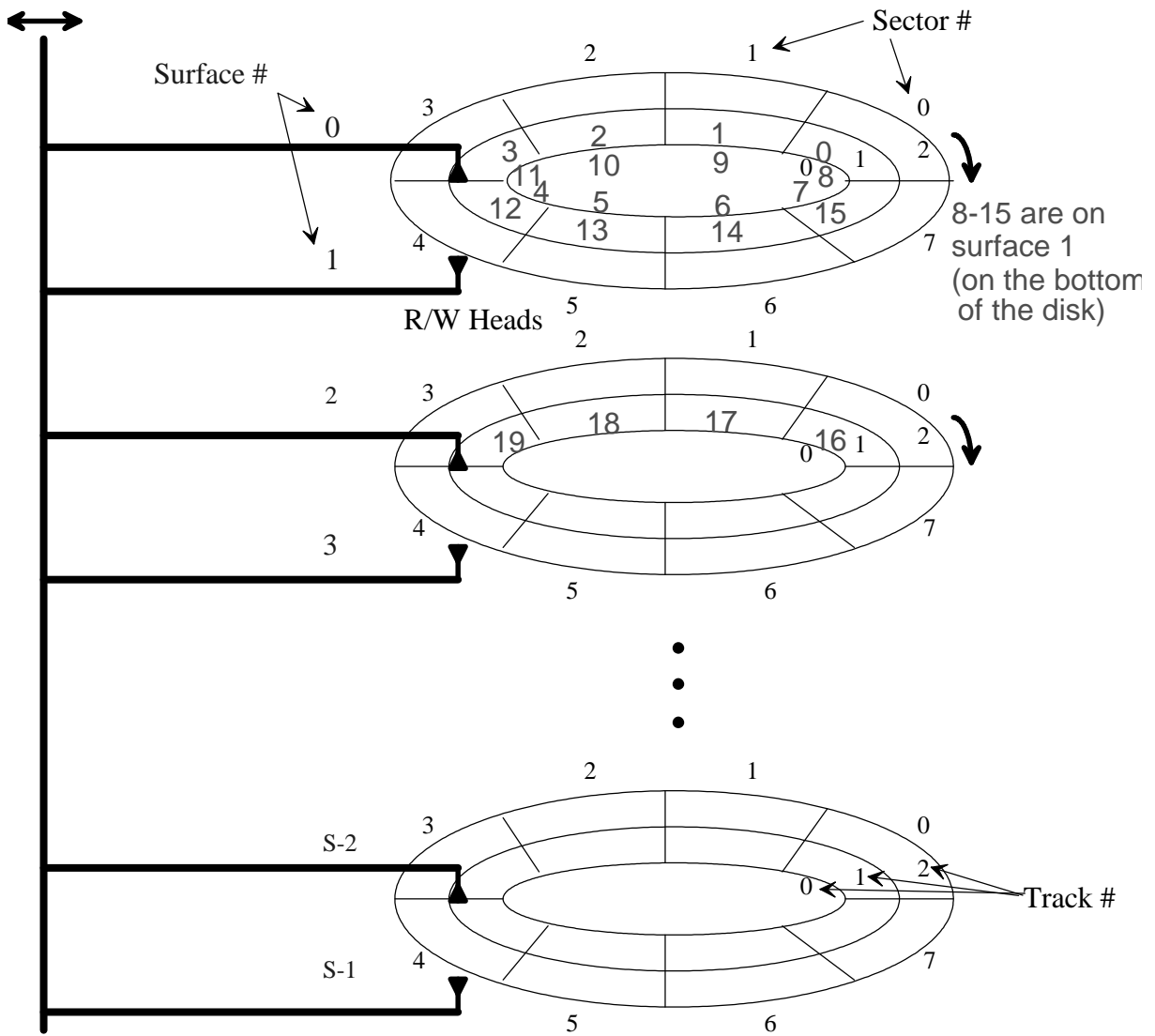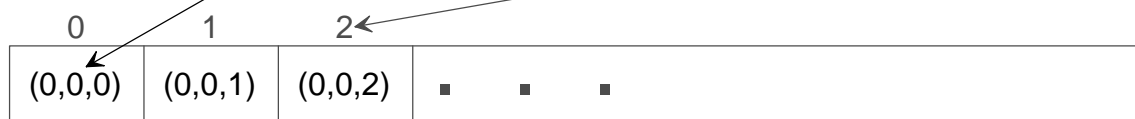
Surface #

Sector #
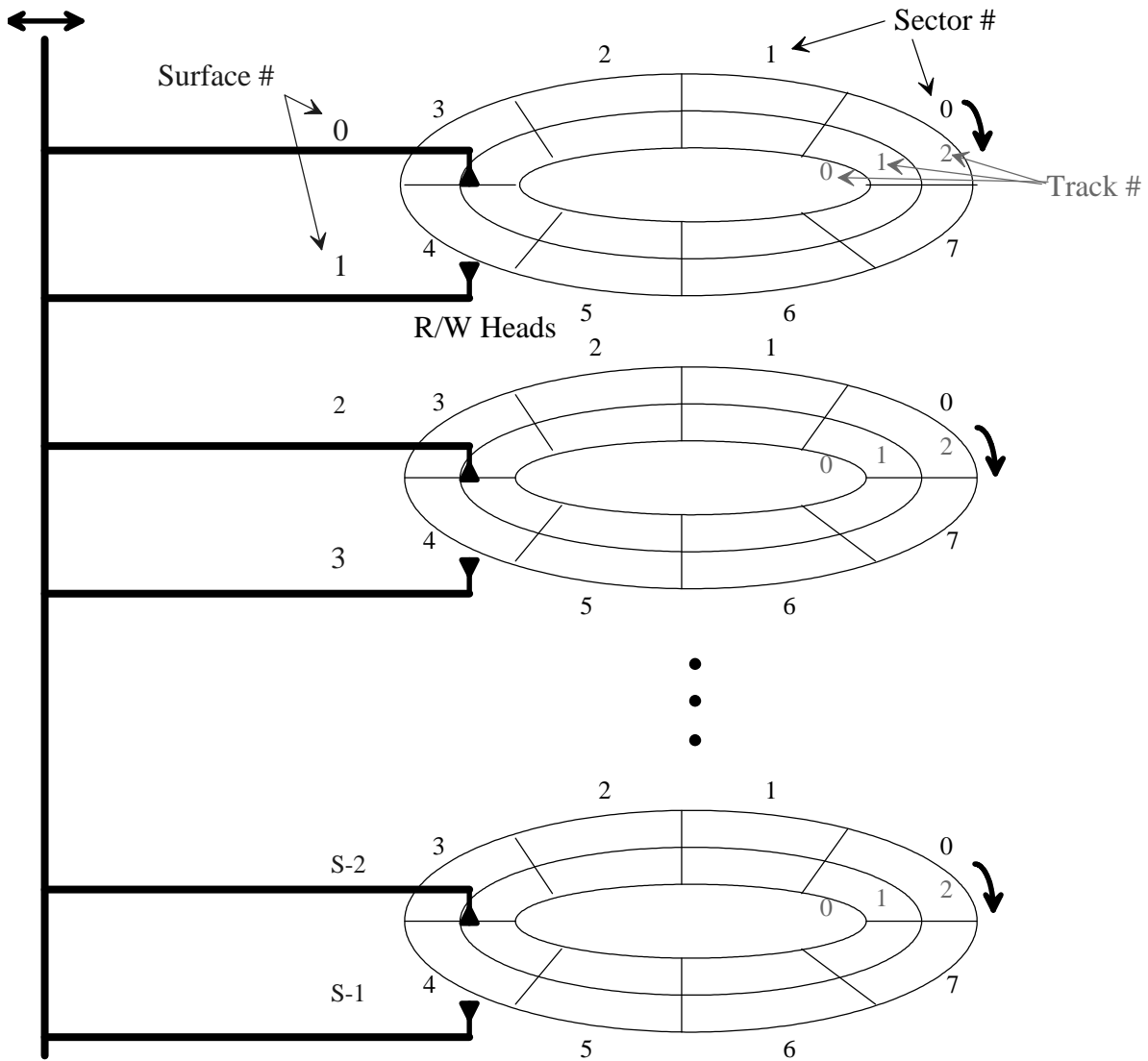
Track #

R/W Heads

Steps to perform a disk read (or write):
1) Move Read/Write (R/W) heads over correct track/cylinder ⟵ seek time
2) Wait for start of specified sector to spin to R/W head ⟵ rotational delay
3) Read (or write) specified sector as it spins under the R/W head ⟵ data transfer time

Logical View of Disk as Linear Collection of Blocks

Surface #

Sector #

R/W Heads

8-15 are on
surface 1
(on the bottom
of the disk)

Track #

(track #, surface #, sector #) to Linear block # mapping

0	1	2			
(0,0,0)	(0,0,1)	(0,0,2)	▪	▪	▪

←——— All of cylinder 0 ———→←——— All of cylinder 1 ———→

Bits of linear block # : | track # | surface # | sector # |