A manufacturer wishes to design a hard disk with a capacity of 30 GB or more (using the standard definition of 1 GB = 2^30 bytes). If the technology used to manufacture the disks allow 1024-byte sectors, 2048 sectors/track, and 4096 tracks/platter, how many platters are required? (Assume a fixed number of sectors per track)

*Answer:*

To find out the capacity of one platter will be product of all sectors = 1024 x 2048 x 4096

1 platter capacity= 8GB

For a 30GB hard disk, we need

30/8 = 3.75 platters.

If we round this value its 4 platters.