Disk Layout Activity

We have a disk of size 64 blocks with block size of 4KB and sector size of 512B. Blocks 0-7 contain the meta data for the file system (free blocks bitmaps, super block, boot control block, inode table, …) and blocks 8-63 contains data blocks.

We want to draw the layout of the meta data block of this disk. The disk has a super block of size 4KB followed by an inode map (for free inodes) with size 4KB, followed by a data block map (for free data blocks) with size 4KB. After these blocks, there is the inode table of size 20 KB (which holds the inode for different files). Plot the layout of the meta data portion of this hard disk and show the blocks and sectors on this hard disk.

Consider that the disks are sector addressable (rather than byte addressable RAM). So, for accessing data on a disk we have to calculate its sector number. Assuming each inode is 256B. Imagine that we want to open a file with inode number