

$$1) i) 2^{32} \text{ blocks} \times 2^{11} \frac{\text{bytes}}{\text{block}} = 2^{43} = .8 \text{ tib} \text{ or } 8.796 \text{ tb}$$

$$ii) \overset{\text{blocksize}}{2048} \times (\overset{\text{pointers}}{12 + 512 + 512^2 + 512^3}) =$$

$$2^{11} \times (12 + 2^9 + 2^{18} + 2^{27}) =$$

$$2^{11} \times 12 + 2^{20} + 2^{29} + 2^{38} =$$

$$275415851008 =$$

$$275.4 \text{ gb} \text{ or } 256.5 \text{ gib}$$

$$2) i) 5 \times TL$$

$$ii) 10 \times TL \text{ to read first 10 blocks} + TL \text{ to read indirect block} \\ 39 \times TL \text{ to read rest of blocks from indirect block} \\ = 50 \times TL$$

$$iii) 80\% \times 50 \times TL + 20\% \times 50 \times TL = \\ 40 \times TL + 10 \times TL$$

- 3)
- 1) Read file header for root
 - 2) Read first data block for root
 - 3) Read file header for home
 - 4) Read data block for home
 - 5) Read file header for ecgr6181
 - 6) Read data block for ecgr6181
 - 7) Read file header for assignment.txt
 - 8) Read first to 10th data block for assignment.txt
 - 9) Read indirect block pointed by 11th entry of assignment.txt
 - 10) Read 11th to 15th data block - 15th block is only partially full