Max File Size

Given:

$$\begin{cases} block\,size = 4K \\ pointer\,size = 4B \end{cases},$$

We get:

$$Max\,File\,Size = number\,of\,pointers \times block\,size$$

$$= (\overbrace{\underbrace{12}_{direct} + \underbrace{1K}_{1-indirect} + \underbrace{1K \times 1K}_{2-indirect} + \underbrace{1K \times 1K \times 1K}_{3-indirect}}^{number\,of\,pointers}) \times 4K$$

$$= 48K + 4M + 4G + 4T$$