1) When you invert an $n \times n$ matrix, how many total arithmetic operations (+, −, ·, /) do you perform? What is the largest size matrix you could reasonably hope to invert on a laptop?

2) Let $A = \begin{bmatrix} 1.99 & 1.01 \\ 6.01 & 2.99 \end{bmatrix}$ and $B = \begin{bmatrix} 1.99 & 1.01 \\ 6.01 & 3.00 \end{bmatrix}$ and $C = \begin{bmatrix} 1.99 & 1.01 \\ 6.01 & 3.01 \end{bmatrix}$. These matrices are all very close to one another. Indeed, they could be interpreted as measurements that three of you took from the same experiment. Compute their inverses. There are situations where roundoff and measurement errors can be significant in the quantity you care about, in this case the inverse!