Question 1:

After successfully implementing a procedure to multiply two randomized matrices,
I found that the estimated flop count of $O(n^3)$ corresponds closely to the graph that was produced by said procedure.
This graph can be found under 'output,png' in this submission. This makes sense because the code has to iterate
through three for-loops of 0-n-1, meaning that we will have a flop count of roughly n*n*n or n^3

Question 2:

This code solves for a solution $y \in R^n$ and writes this solution into b, saving a small amount of space.
This function takes roughly $O(n^2)$ time to complete, but will usually take less due to the for-loop structure.
Because almost half of the elements of the matrix are 0, we would be wasting time computing them, so instead
we can just have our for-loop go up until we reach the zeroes. i.e. we will save a ton of time and resources
using this method.