**Newton–Pepys problem**

The Newton–Pepys problem is a probability problem concerning the probability of throwing sixes from a certain number of dice.

In 1693 Samuel Pepys and Isaac Newton corresponded over a problem posed by Pepys in relation to a wager he planned to make. The problem was:

Which of the following three propositions has the greatest chance of success?

A. Six fair dice are tossed independently and at least one “6” appears.

B. Twelve fair dice are tossed independently and at least two “6”s appear.

C. Eighteen fair dice are tossed independently and at least three “6”s appear.

Your task is to simulate these three situations, work out the probably of success for each of the three situations. If you run this enough times you should get a clear result- How many times is enough? 1000? 10000? 100000?

Please diagram your final solution.