

83. You are the consulting actuary to a group of venture capitalists financing a search for pirate gold.

It's a risky undertaking: with probability 0.80, no treasure will be found, and thus the outcome is 0.

The rewards are high: with probability 0.20 treasure will be found. The outcome, if treasure is found, is uniformly distributed on [1000, 5000].

You use the inverse transformation method to simulate the outcome, where large random numbers from the uniform distribution on [0, 1] correspond to large outcomes.

Your random numbers for the first two trials are 0.75 and 0.85.

Calculate the average of the outcomes of these first two trials.

(A) 0

(B) 1000

(C) 2000

(D) 3000

(E) 4000