Warm-up worksheet #3

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Simulations

Problem 1.

Draw 100 simulated values from $Bernoulli(p = 0.2)$. What is the proportion of "successes" in your simulated batch?

Solution:

Problem 2.

Draw 1000 simulated values from $Binomial(n = 100, p = 0.2)$. Plot the histogram of your simulated values.

Solution:

Problem 3.

Consider the following two-step experiment. First you draw a simulated value from a Bernoulli(p=1/3). If the drawn value from the Bernoulli equals 0, then you draw a simulated value from Binomial(n=50,p=0.5). On the other hand, if the drawn value from the Bernoulli equals 1, then you draw a simulated value from Binomial(100,0.5).

You should repeat the above two-step experiment 1000 times and draw the histogram of the simulated values.

Solution: