

## Templates for Solving Statistics Problems Using Simulation

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**Type of question:** Hypothesis test of \_\_ What parameter(s)? What claim(s)? \_\_\_\_\_

**Method:** \_\_\_\_\_ Use words to declare which of the StatKey menus is needed \_\_\_\_\_

**Write the hypotheses in symbols:**

\_\_\_\_\_

**Identify the sample statistic(s)** by symbols and with their numerical value(s). \_\_\_\_\_

If a difference is relevant, give the symbols and numerical values for it as well. \_\_\_\_\_

**Use simulations to find the p-value five times:** \_\_\_\_\_

**Decide on the p-value you will use for the p-value:** \_\_\_\_ Median \_\_\_\_\_

**Optional:** Keep a screenshot of the last simulation.

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**Type of question:** Confidence interval for \_\_\_\_ What parameter or difference of parameters? \_\_\_\_

**Method:** \_\_\_\_\_ Use words to declare which of the StatKey menus is needed \_\_\_\_\_

**Identify, in words, the parameter to estimate:** \_\_ a single parameter or a difference of parameters \_\_

**Identify the sample statistic(s)** by symbols and with their numerical value(s). \_\_\_\_\_

If a difference is relevant, give the symbols and numerical values for it as well. \_\_\_\_\_

**Five simulations** for the \_\_\_\_ (what percent) \_\_\_\_ confidence interval: \_\_\_\_\_

**Compute as needed to answer the question in the assignment:** \_\_\_\_\_

**Optional:** Keep a screenshot of the last simulation.

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**Type of question:** Sampling Distribution of \_\_\_\_ (what statistic) \_\_\_\_\_

**How is the population given to you?** \_\_\_\_

For a proportion, merely by the population proportion. \_\_\_\_\_

For a mean, you need the data for the whole population \_\_\_\_\_

**Size of the sample:** \_\_\_\_\_

**What is the question?** \_\_\_\_\_ Examples: What is the standard error? \_\_\_\_\_

What does the shape look like? \_\_\_\_\_

**If the answer to the question is numerical,**

then give the five values of that number for five simulations. \_\_\_\_\_

**Decide on a number for the answer** to the numerical question: \_\_\_\_ Median \_\_\_\_

**Optional:** Keep a screenshot of the last simulation.

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