**Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Making Inferences and Justifying Conclusions (S.IC.2)**

A quiz in math class consisted of 5 true or false questions. Only 4 out of 30 students in Mr. Denario’s class got all 5 questions correct. Mr. Denario used a simulation of flipping a coin to represent the results of his class quiz. He used heads to represent a correct answer and tails to represent an incorrect answer. He flipped 5 coins to represent the 5 problems on the quiz and recorded the number of heads in each group of 5 coins. He repeated the simulation 100 times and recorded the results in this table.



Which conclusion is supported by the data for the class and the simulation?

|  |  |  |
| --- | --- | --- |
| Statement | Yes or No | Explain your thinking |
| 1. The simulation model is consistent with the class data because in both the observed class results and the simulation model the results of all heads on all 5 problems correct was 4. |  |  |
| 1. The simulation model is consistent with the class data because each coin flipped and each question on the test had only two outcomes and an equal chance of getting either outcome. |  |  |
| 1. The simulation model is not consistent with the class data because there are 30 students in the class and there were 100 samples in the coin simulation. |  |  |
| 1. The simulation model is not consistent with the class data because the observed class results had 13% of the students with all 5 problems correct, and the simulation model only had 4% of the samples with all 5 heads. |  |  |

Source:

<https://assessmentresource.org/wp-content/uploads/2019/07/Integrated_Math_3_EOY_Item_Set.pdf>

Integrated Math III EOY, Spring 2015, Item M42708