**Solutions**

# Algebra II Journal

## Module 4: Inferences

## Sneaking Statistics

**This journal belongs to:**

Module 4: Inferences

## Algebra II Journal: Reflection 1

Respond to the following reflection activity and submit to your teacher.

**The other lessons in this module have been in the context of weather and weather-related events. The graphs used in this lesson of the module have not been weather related.**

**To keep with the weather-related theme of the module, find (or create) a weather-related graph that presents misleading data.**

**Reconstruct the graph so that it accurately presents the data.**

**Record both graphs. You may use the graphing paper on the following pages, your graphing calculator, or other graphing resources in the Calculator Resources section of the website.**

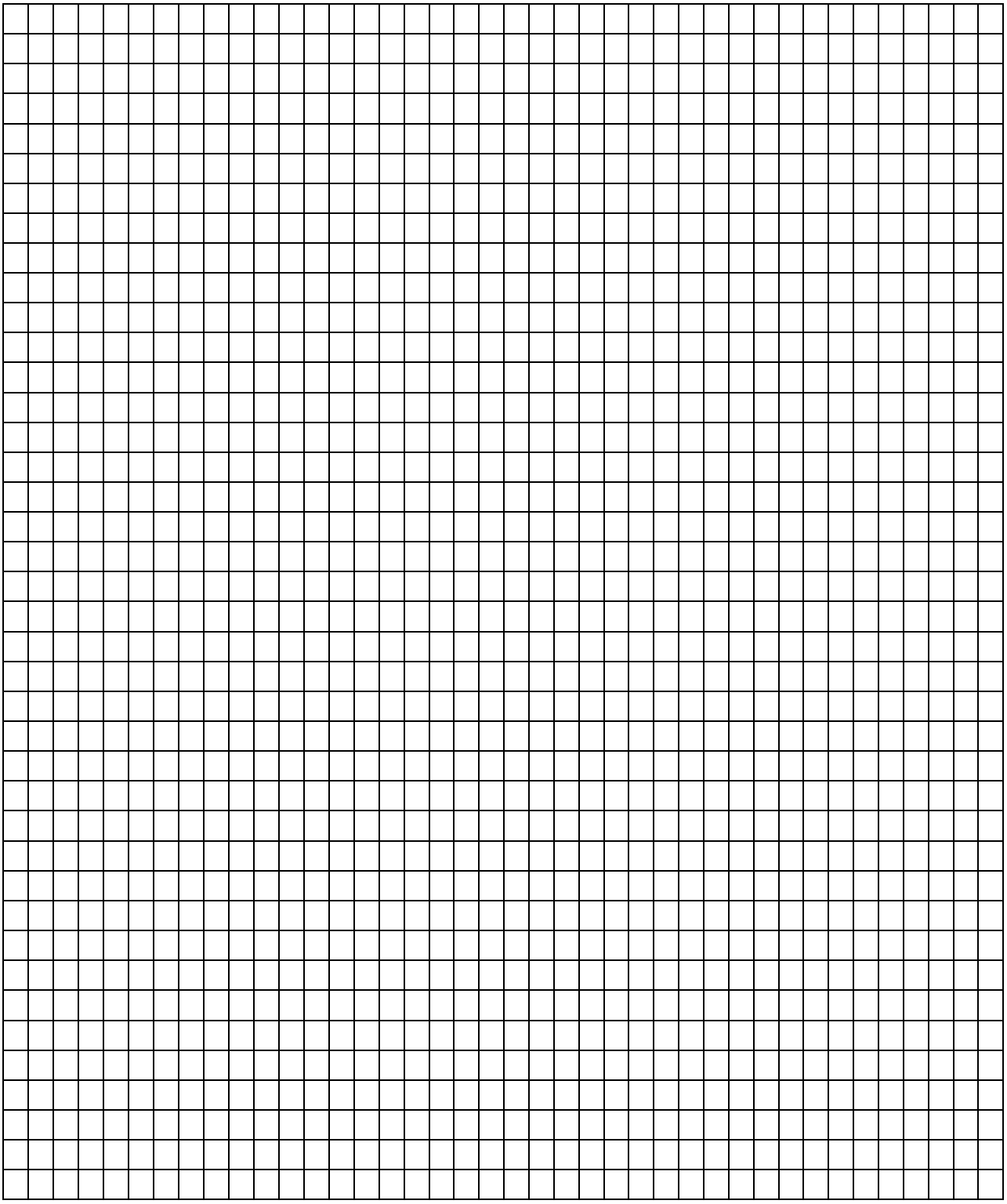
**Provide a summary as to what makes the first graph misleading, and how you avoid misleading representations in the second graph.**

**Answer:**

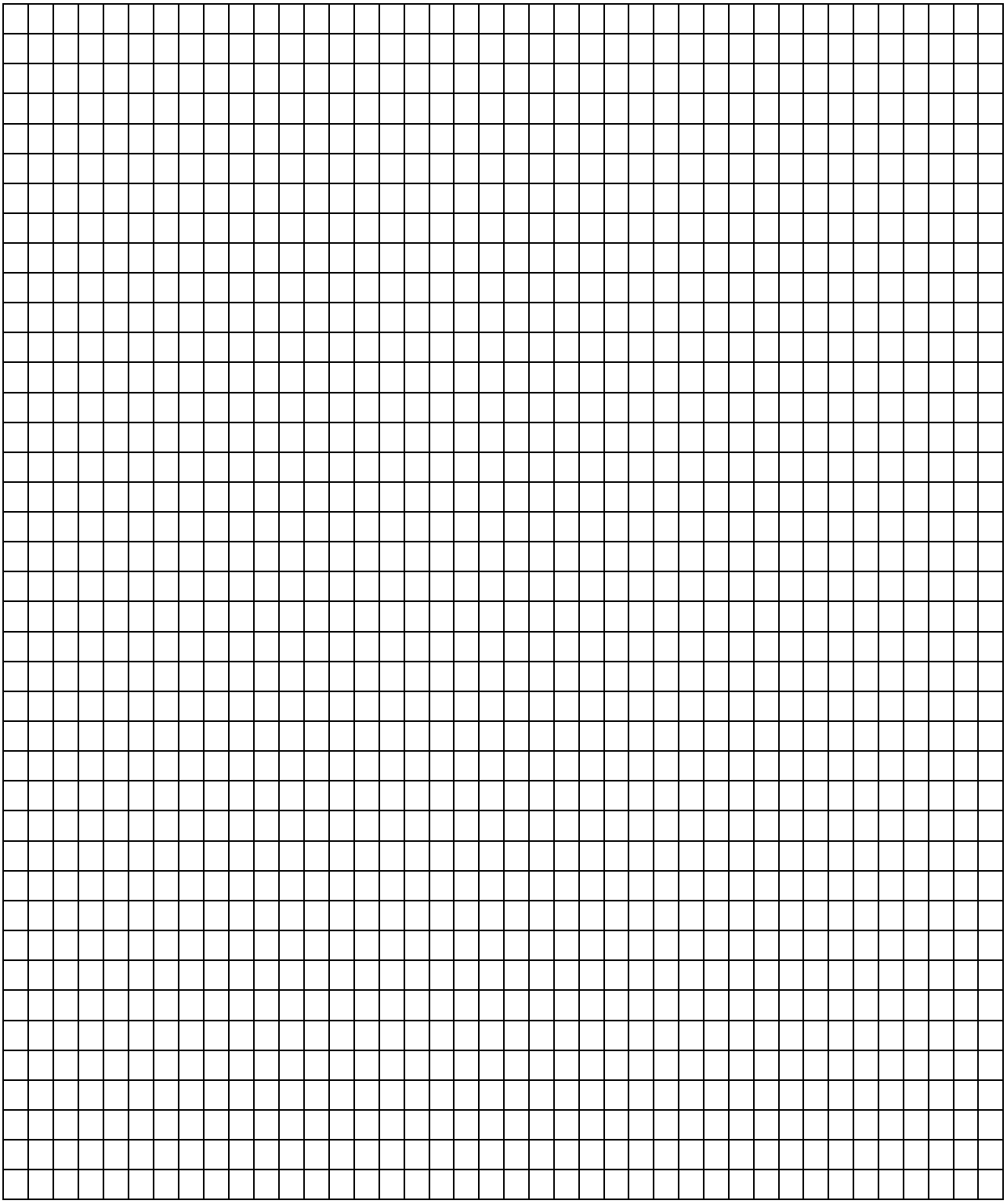
*Answers will vary.*

Module 4: Inferences

**Graph 1**



**Graph 2**



## Algebra II Journal: Reflection 2

Respond to the following reflection questions and submit to your teacher.

**Read the article, The Hidden Biases in Big Data found at**

**HBR Blog Network.**

**Summarize the article's views on bias in statistical reports and research.**

**Answer:**

*Answers will vary. The students should highlight the following items mentioned in the article:*

- Data sets can be summarized and manipulated to present the author's agenda or objective, obscuring the truth.
- Data is presented to encourage an "association implies causation" conclusion.
- There are hidden biases in both the collection and analysis of data

**Use evidence from the article to answer the author's question: When presented with enough data, can numbers actually speak for themselves?**

**Answer:**

Allowing "numbers to speak for themselves" creates the risk of misunderstanding the results.