Imagine you are a manager at a major bottling company. Customers have begun to complain that the

bottles of the brand of soda produced in your company contain less than the advertised sixteen (16)

ounces of product. Your boss wants to solve the problem at hand and has asked you to investigate. You

have your employees pull thirty (30) bottles off the line at random from all the shifts at the bottling plant.

You ask your employees to measure the amount of soda there is in each bottle. Note: Use the data set

provided by your instructor to complete this assignment.

Bottle Number Ounces Bottle Number Ounces Bottle Number Ounces

1 14.5 11 15 21 14.1

2 14.6 12 15.1 22 14.2

3 14.7 13 15 23 14

4 14.8 14 14.4 24 14.9

5 14.9 15 15.8 25 14.7

6 15.3 16 14 26 14.5

7 14.9 17 16 27 14.6

8 15.5 18 16.1 28 14.8

9 14.8 19 15.8 29 14.8

10 15.2 20 14.5 30 14.6

Write a two to three (2-3) page report in which you:

1. Calculate the mean, median, and standard deviation for ounces in the bottles.

2. Construct a 95% Confidence Interval for the ounces in the bottles.

3. Conduct a hypothesis test to verify if the claim that a bottle contains less than sixteen (16) ounces

is supported. Clearly state the logic of your test, the calculations, and the conclusion of your test.

4. Provide the following discussion based on the conclusion of your test:

a. If you conclude that there are less than sixteen (16) ounces in a bottle of soda, speculate

on three (3) possible causes. Next, suggest the strategies to avoid the deficit in the

future.

Or

b. If you conclude that the claim of less soda per bottle is not supported or justified, provide

a detailed explanation to your boss about the situation. Include your speculation on the

reason(s) behind the claim, and recommend one (1) strategy geared toward mitigating

this issue in the future.

Your assignment must follow these formatting requirements:

 Be typed, double spaced, using Times New Roman font (size 12), with one-inch margins on all

sides. No citations and references are required, but if you use them, they must follow APA

format. Check with your professor for any additional instructions.

 Include a cover page containing the title of the assignment, the student’s name, the professor’s

name, the course title, and the date. The cover page and the reference page are not included in

the required assignment page length

The specific course learning outcomes associated with this assignment are:

 Calculate measurements of central tendency and dispersal.

 Determine confidence intervals for data.