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Question 4

Dixie Queen uses an automatic ice cream dispenser to fill pint-sized containers of ice cream. The company that makes the dispenser says the volume it dispenses into each container follows a normal distribution with σ= 1.5 ml.

The Dixie Queen manager randomly selected 15 ice cream pints and found that the average volume was 471.46 ml. She wants to know if her machine is performing as expected.

(1/1 point)

4a. What is the expected variability in sample means of size n=15? *(Find the standard error and round to 3 decimal places.)*

0.387

0.387

Answer: .387

Help

| Hide Answer | *You have used 1 of 1 submissions* |

(1/1 point)

4b. What is the margin of error, assuming 95% confidence? *(Round to 3 decimal places and **use this value in the following calculations**.)*

> 0.759

0.759

Answer: .759

| Hide Answer | *You have used 1 of 1 submissions* |

4c. Find the 95% confidence interval for the mean volume for this sample of 15 randomly selected ice cream pint containers.

(1/1 point)

Lower Bound *(Round to 1 decimal place.)*

> 470.7

470.7

Answer: 470.7

Hide Answer   *You have used 1 of 1 submissions*

Help

(1/1 point)

Upper Bound *(Round to 1 decimal place.)*

472.2

472.2

Answer: 472.2

Hide Answer   *You have used 1 of 1 submissions*

(1/1 point)

4d. A pint is equivalent to 473.20 ml. Do you think the dispenser is working as reported?

○ Yes

● No ✔

Hide Answer   *You have used 1 of 1 submissions*

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