

Hospitality and Tourism Restaurant Management Multiple Choice Math Assessment Problems



All math problems address TEKS 130.224. Restaurant Management.

(1) The student gains academic knowledge and skills required to pursue the full range of career and postsecondary education opportunities within the restaurant industry. The student is expected to:

(C) calculate correctly using numerical concepts such as percentages and estimations in practical situations.

Question 1. Each time you fill up a drink from the soda fountain, it uses \$.05 worth of product. If you charge \$1.99 for a fountain drink and have free refills, what is your percentage profit on a customer that gets three free refills?

- a. 88%
- b. 90%
- c. 92%
- d. 94%

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Question 2. Rosario runs a restaurant that sells a large order of French fries for \$2.99. If Rosario knows that she is making approximately 62% profit on every order of large French fries, how much does a large order of French fries cost to produce?

- a. \$1.14
- b. \$1.53
- c. \$1.85
- d. \$2.37

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(E) use mathematics and science knowledge and skills to produce quality food products.

Question 3. Kim is tripling her world famous chocolate cake recipe. If the recipe originally calls for 12 ounces of dark chocolate to be mixed in, how many pounds of dark chocolate should be added to the new tripled batch?

- a. 2.25 pounds
- b. 3 pounds
- c. 9 pounds
- d. 36 pounds

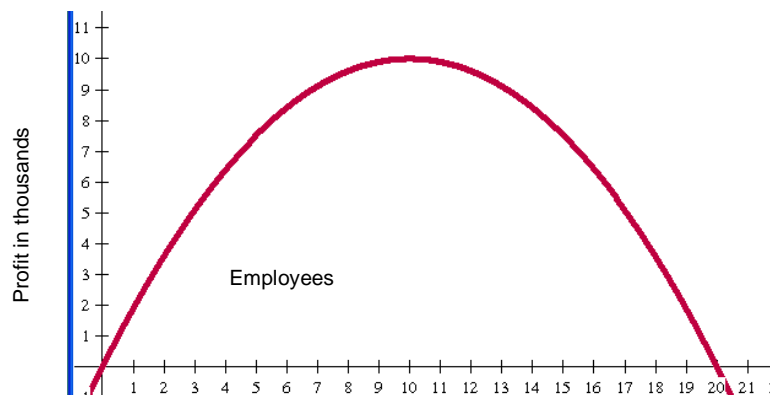
(1) The student gains academic knowledge and skills required to pursue the full range of career and postsecondary education opportunities within the restaurant industry. The student is expected to:

(C) calculate correctly using numerical concepts such as percentages and estimations in practical situations.

(3) The student solves problems using critical thinking, innovation, and creativity independently and in teams. The student is expected to:

(C) use principles of budgeting and forecasting to maximize profit and growth.

Question 4. Charles has found that there is a relationship between the profit $P(e)$ he makes at his restaurant and the number of employees e working at any given time.



If the above graph is $P(e) = -\frac{1}{10}e^2 + 2e$, how many employees should be working to maximize the profit?

- a. 6
- b. 10
- c. 12
- d. 20

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Question 5. Analyze the chart below.



What kind of correlation exists between employee wellness and customer complaints?

- Positive correlation
- Negative correlation
- Constant correlation
- No correlation

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(9) The student demonstrates an understanding that personal success depends on personal effort. The student is expected to:

(C) analyze the effects of health and wellness on employees performance.

Question 6. Refer to the chart in problem #5. Which of the following statements could be supported from the data?

- a. Employee wellness has no effect on customer complaints.
- b. Customers complain about employee wellness.
- c. As employee wellness increases, customer complaints increase.
- d. Employee wellness has an inverse relationship with customer complaints.

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Question 7. The following numbers are the scores given to your restaurant on a five star scale.

2, 3, 5, 1, 1, 4, 2, 4, 1, 4, 4, 2, 5, 4

Which measure of central tendency would give your restaurant the best overall rating?

- a. Mean
- b. Median
- c. Mode
- d. Range

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Question 8. Using the data set below, The Better Business Bureau averages the scores to give a restaurant its rating. What is the restaurant's rating?

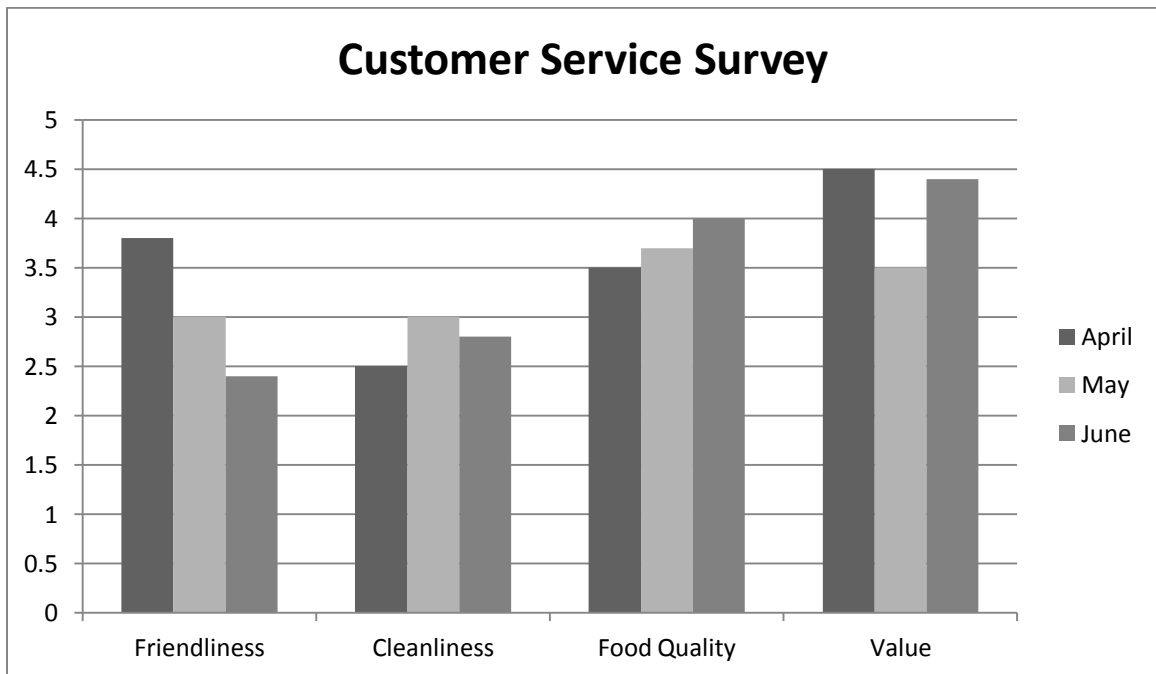
4, 3, 5, 5, 1, 4, 2, 4, 2, 4, 4, 2, 5, 4

- a. 2.5 stars
- b. 3 stars
- c. 3.5 stars
- d. 4 stars

(12) The student understands the use of technical knowledge and skills required to pursue careers in the restaurant industry, including knowledge of design, operation, and maintenance of technological systems. The student is expected to:

- (B) analyze customer comments to formulate improvements in services and products and training of staff.

Question 9. Look at the chart below which records the responses for customers during a three month period.



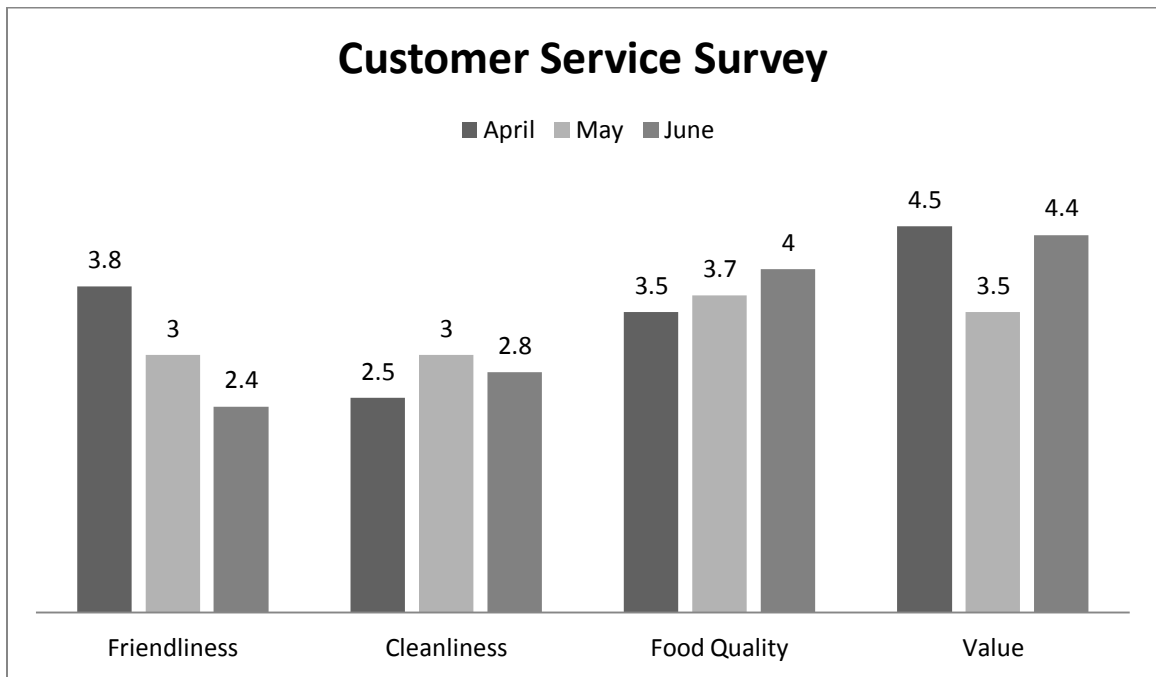
Which on the following statements is **NOT** supported by the data?

- Friendliness had the largest one month drop of any area.
- Food quality has consistently improved.
- Value received the highest one month score.
- Friendliness scores have gone down every month.

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Question 10. Which area has the lowest mathematical average?



- a. Friendliness
- b. Cleanliness
- c. Food Quality
- d. Value

Answer Key

- 1) B
- 2) A
- 3) A
- 4) B
- 5) B
- 6) D
- 7) C
- 8) B
- 9) A
- 10) B