

Hospitality and Tourism

Hospitality Services

Multiple Choice Math Assessment Problems

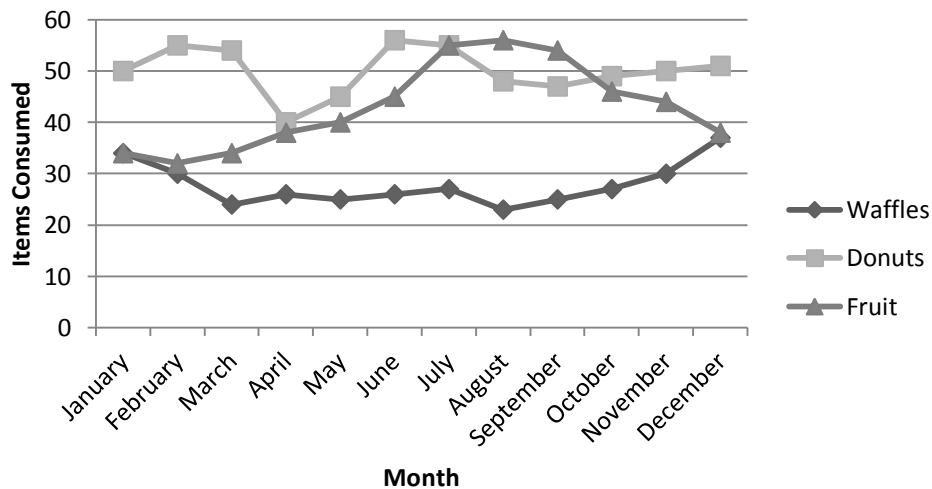


All math problems address TEKS 130.228. Hospitality Services.

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

- (A) apply advanced reading, writing, and mathematical skills necessary to perform job tasks in the hospitality industry.
- (B) explain the effects that supply and demand have on the hospitality industry.

Question 1. Analyze the chart below.



Gloria is analyzing trends of month-to-month demand for the complimentary breakfast items at the hotel she manages. Using the graph above, which of the following statements is a reasonable conclusion from the graph?

- a. Donuts are most expensive in February.
- b. Nobody likes fruit.
- c. Donuts average the highest consumption.
- d. Waffles are the best breakfast item.

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Question 2. A hotel uses the same distributor for all its complimentary breakfast items in order to save money on shipping. The hotel pays \$15 a week for all of the items. Which of the following equations could represent C the cost to the hotel for getting d donuts at \$.30 each and w waffles at \$.35 each?

- a. $C = .30d - .35w + 15$
- b. $C = .30d + .35w + 15$
- c. $C = d + w + 15$
- d. $C = .30w + .35d + 15$

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(7) The student solves problems using critical-thinking skills independently and in teams. The student is expected to:

(A) manage profitability by implementing effective marketing strategies.

Question 3. Vernon runs a restaurant that is advertising using a buy one get one free dinner with the purchase of two drinks. If the restaurant uses the following formula to analyze profit p in terms of meals m and drinks d . $p = 2(m + d) - m$ which equation is equivalent?

- a. $p = 2 + d$
- b. $m = p - 2d$
- c. $d = p + m$
- d. $p = m + d$

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Question 4. Peter is closing the register at the end of a busy day. He is in charge of counting all the change at the end of the day. There are 165 total coins at the end of the day counting only quarters and dimes. If Peter counts up \$39 in quarters and dimes how many quarters are there?

- a. 25
- b. 81
- c. 115
- d. 150

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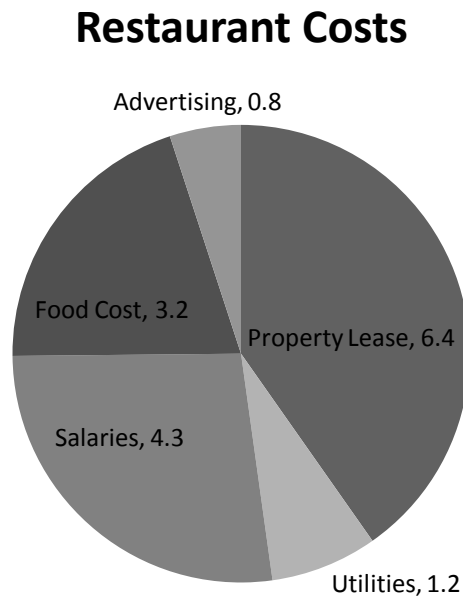
Question 5. Peter is closing the register at the end of a busy day. He is in charge of counting all the change at the end of the day. There are 165 total coins at the end of the day counting only quarters and dimes. If Peter counts up \$39 which of the following systems of equations could be used to find the number of quarters q and dimes d ?

- a. $d + q = 165$
 $d + q = 39$
- b. $d + q = 165$
 $10d + 25q = 39$
- c. $d + q = 165$
 $.1d + .25q = 39$
- d. $10d + 25q = 165$
 $d + q = 39$

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Question 6. Analyze the chart below.



If the pie chart above represents all costs a restaurant has during a month, what percentage of the monthly cost is from the properties lease?

- a. 6.4%
- b. 15.9%
- c. 30%
- d. 40.3%

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Question 7. If the numbers in the chart on #6 are in thousands, which of the following is a reasonable conclusion?

- a. \$800 is spent on advertising every month.
- b. If the restaurant makes \$15,000 a month, it will break even
- c. Salaries make up exactly 25% of the costs.
- d. Serving seafood has raised the restaurant's food costs.

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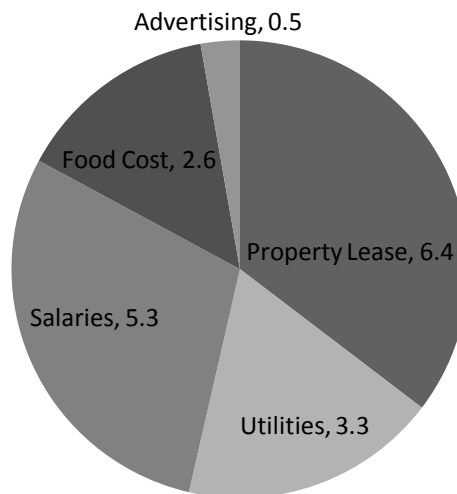
(A) apply advanced reading, writing, and mathematical skills necessary to perform job tasks in the hospitality industry.

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(A) manage profitability by implementing effective marketing strategies.

Question 8. Analyze the chart below.

Monthly Hotel Costs



If all of the hotel's are costs are in thousands, what is the total profit for the month shown?

- The restaurant will profit \$18.10.
- The restaurant will bring in a profit of \$18,100.
- The restaurant will profit over \$20,000 a month.
- There is not enough information to determine profit.

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Question 9. If the hotel in #8 wants their property lease to be less than 30% of the total cost, how much should be paid for the lease assuming that all expenses remain the same?

- a. \$2,425 per month
- b. \$5,430 per month
- c. \$6,400 per month
- d. \$9,405 per month

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Question 10. Isabella is selling travel packages for a travel company. She is paid \$7 an hour with a 15% commission on all packages she sells. She knows she will work 40 hours this week, but she needs \$845 for her bills this month. How much does she need to earn from travel package commissions to reach her goal?

- a. \$ 565
- b. \$2,548
- c. \$3,767
- d. \$8,475

Answer Key

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