

## Restaurant Math Calculations

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Calculate the correct answer for the word problems. Be sure to show your work.

1. The dishwasher at a restaurant is loaded with the same number of dishes every time it is used. The table shows the total number of dishes washed as a function of the number of times the dishwasher is used.

|   |     |
|---|-----|
| 2 | 56  |
| 4 | 112 |
| 6 | 168 |
| 8 | 224 |

Based on the data in the table, what is the total number of dishes that will have been washed when the dishwasher is used 12 times?

- a. 280
  - b. 308
  - c. 28
  - d. 336
2. Jacob runs a Chinese food restaurant that sells eggrolls. The business makes 65% profit on every eggroll it sells. In one day, 740 eggrolls were sold for a total profit of \$841.75. What was the selling price of each eggroll?

Selling Price =  $\frac{\text{Profit}}{N \times R}$ , where N = number of eggrolls and R = rate as a decimal.

- a. \$2.00
- b. \$1.75
- c. \$1.14
- d. \$0.65

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3. Each time you fill up a drink from the soda fountain, it costs \$.27. If you charge \$2.29 for a fountain drink and have free refills, what is your percentage profit on a customer that gets two free refills?

$$\text{Percentage profit} = \frac{\text{cost of soda} - (\text{price per refill}) * (\text{number of total sodas served})}{\text{cost of soda}} * 100$$

- a. 65%
  - b. 76%
  - c. 148%
  - d. 175%
4. Cynthia is using her recipe to cook rice at the restaurant. If the recipe originally calls for 1 cup of rice, how many pounds of rice will she need to cook to feed 100 people if her recipe serves four?

$$1 \text{ cup} = 8 \text{ ounces} \quad 1 \text{ pound} = 16 \text{ ounces}$$

$$\text{Ounces of rice per serving} = \frac{\text{ounces of rice in recipe}}{\text{number of servings recipe makes}}$$

$$\text{Total pounds of rice needed} = \frac{\text{number of people} * \text{ounces of rice per serving}}{16}$$

- a. 50 pounds
- b. 200 pounds
- c. 12.5 pounds
- d. 800 pounds

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5. A restaurant uses 15 pounds of bacon per day. There are 31 days this month. If bacon is purchased in 15 pound cases at \$55.20/2, how much did the restaurant spend on bacon this month?

$$C(x) = \frac{55.20}{2} x$$

- a. \$27.60
  - b. \$414.00
  - c. \$12,834.00
  - d. \$855.60
6. A restaurant uses 1.5 pounds of cheese per day. There are 30 days this month. If cheese is purchased in 5 pound bags at \$99.51/6, how much did the restaurant spend on cheese this month?  
Use this equation to find the cost for using x pounds of cheese:

$$C(x) = \frac{99.51/6}{5} * x$$

- a. \$45.00
- b. \$3.32
- c. \$149.27
- d. \$4.98