

Culinary Math Practice (Key)

Calculate the common math problems used in culinary kitchens.

Percentages

Most recipes utilize percentages in measuring. It is important to know and understand how to calculate percentages quickly and accurately.

1. 10% of 543 = **54.3**
2. 50% of 444 = **222**
3. 5% of 44 = **2.2**
4. 15% of 24 = **3.6**
5. 75% of 880 = **660**

Cost of Goods Sold

Calculate Cost of Goods Sold (COGS) for each scenario.

6. Jimmy's Chicken Shack started the week with \$1,258.00 worth of food on hand. On Friday, the manager received a \$2,783.00 order. Sunday night, at the close of the period, they counted \$987.00 worth of food on hand. What were the COGS for the period?
 $(\$1,258.00 + \$2,783.00) - \$987.00 = \$3,054.00$
7. Sherry's Custard Stand started the week out with \$750.54 worth of ingredients on hand. The manager received \$876.48 worth of food from the food vendor on Tuesday and had to run to the grocery store for \$63.21 worth of strawberries on Friday. After a particularly busy week, they reported only \$54 in food on hand at the end of the period. What were the COGS for the period?
 $(\$750.54 + \$876.48 + \$63.21) - \$54.00 = \$1,636.23$
8. On June 1, 2014, Briana's Burgers reported \$12,007.02 in food inventory. Food was delivered to the restaurant in the following amounts over the course of the month:

June 10: \$3,567.89
June 17: \$4,569.02
June 24: \$3,898.90

As of midnight, June 31, 2014, Briana's Burgers reported \$14,202.22 in inventory. What was the COGS for the period?

$(\$12,007.02 + \$3,567.89 + \$4,569.02 + \$3,898.90) - \$14,202.22 = \$9,840.61$

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Food Cost Percentage

Calculate Food Cost Percentage each scenario.

9. Bryan's Bakery utilized inventory reports and the Cost of Goods Sold report for January as \$12,312.95. Sales during this period were \$39,007.01. What was the food cost percentage for January?

$$\text{\$12,312.95} \div \text{\$39,007.01} = 31.5659\%$$

10. Allie's Apple Stand had a busy, busy month. She only sells three items but she served many customers in June. On August 1, Allie started with one case of apples worth \$36.02 and one case of water worth \$15.12. She ordered \$2,396.75 in food items in the month of August and had \$1,204.44 in inventory left at the end of the period. Allie needs to know her food cost percentage to see how her business is running. She didn't remember to write down her sales numbers but from her tickets she knows that she sold the following items and quantities.

Item	Price	Number Sold in August
Caramel Apples	\$3.25	956
Fresh Apples	\$1.25	659
Bottled Water	\$1.00	852

What is Allie's food cost percentage for the month of August?

$$\text{Cost of Goods Sold} = (\text{\$36.02} + \text{\$15.12} + \text{\$2,396.75}) - \text{\$1,204.44} = \text{\$1,243.45}$$

$$\text{Sales} = (956 \times \text{\$3.25}) + (659 \times \text{\$1.25}) + (852 \times \text{\$1.00}) = \text{\$3,107} + \text{\$823.75} + \text{\$852.00} = \text{\$4,782.75}$$

$$\text{Food Cost Percentage} = \text{\$1,243.45} \div \text{\$4,782.75} = 25.9986\%$$