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*I can **solve real-world percent problems**.*

Gratuity (Tip): A percent earned by a person for providing a service.

The tip is a ___*percentage*___ of your bill.

    Step 1: ___*Multiply*___ the percent by the bill to get the tip.

    Step 2: ___*Add*___ this amount to ___*the bill*___.

Example 1:
You want to leave a 15% tip and your meal costs $10. How much should you leave for a tip?

$$0.15 \cdot 10 = \$1.50$$

How much did you spend altogether?

$$\$11.50$$

Example 2 (You Try):
You want to leave a 20% tip and your meal costs $15. How much should you leave for a tip?

$$0.20 \cdot 15 = \$3$$

How much did you spend altogether?

$$\$18.00$$

Going Backwards (Finding the Bill)

It may be helpful to set up a ___*proportion*___.

Example 1:
Justin leaves a tip of $6, which was 20% of the cost of his meal. How much did his meal cost?

$$\frac{20}{100} = \frac{6}{x}$$

$$\$30$$

Example 2:
Eric's family leaves a tip of $18, which was 15% of the cost of their bill. How much did their meal cost?

$$\frac{15}{100} = \frac{18}{x}$$

$$\$120$$

Sales Tax: A percent of a purchase charged by the government

Tax is a ___percentage___ OF your purchase

Step 1: ___Multiply___ the percent by the purchase to get the tax.

Step 2: ___Add___ the answer to ___the original purchase___.

Example 1:
The sales tax is 6.5%. If you buy a television for $500, how much is your sales tax?

$$0.065 \cdot 500 = \$32.50$$

Including tax, how much did you spend?

$$\$532.50$$

Example 2 (You Try):
The sales tax is 7%. If you spent $60 on items, how much is your sales tax?

$$0.07 \cdot 60 = \$4.20$$

Including sales tax, how much did you spend?

$$\$64.20$$

Example 3:

Menu:
Hamburger meal: $8.75
Drink: $2.50

You and a friend each order a hamburger meal and drink. What is your total amount you will spend (not including tax... yet)?

$$\$22.50$$

What is the tax of the meal with 6.5% tax?

$$0.065 \cdot 22.5 = \$1.46$$

What is the final bill?

$$\$23.96$$

Example 4 (You Try):

The bill for a family dinner was $49.53. What is the bill with a 6.5% sales tax?

$$49.53 \cdot 1.065 = $$
$$\$52.75$$

Mr. Jones wants to leave about 15% of the bill as a tip. What is the tip?

$$\$52.75 \cdot 0.15 = \$7.91$$

What is the total amount the family paid?

$$\$60.66$$