

Prices Involving Sales Tax

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CONCEPT 1 Prices Involving Sales Tax

Here you'll learn to find prices involving sales tax.

Remember Mr. Kemp and the discount at the supermarket?

Well, if you think back to the last Concept, the customer saved a lot of money by shopping on the big discount day. In fact, the total cost for the customer's groceries was \$293.25.

However, that did not include a 5% sales tax.

Do you know what a sales tax is or how to calculate it?

This Concept is all about how to do just that. Pay close attention and you will be able to calculate the customer's total cost including sales tax at the end of the Concept.

Guidance

When we figured out a price with a discount, we subtracted because a discount is an amount taken off of an original price. *Sales tax* is just the opposite!

What is sales tax?

Sales tax is an amount that is *added* to a price. Many states have sales tax. When you shop in those states, you have to add a sales tax to your total. Sales tax is a percentage.

How can we calculate a price that includes sales tax?

First, we figure out the amount of the sales tax. Then we add that to the original price to figure out the new price.

The state of Maine has a sales tax of 5%. If you purchased a book for \$25.00, how much would you pay for the book if you bought it in Maine?

First, we figure out the amount of sales tax for a \$25.00 book. We need to find 5% of 25. We change 5% to a decimal, .05, and then multiply.

$$\begin{array}{r} 25 \\ \times .05 \\ \hline 1.25 \end{array}$$

The amount of sales tax is \$1.25. Now, because this is sales tax, we need to add this amount to our original price.

$$\begin{array}{r} \$25.00 \\ + 1.25 \\ \hline \$26.25 \end{array}$$

We would pay \$26.25 for the book in the state of Maine.

Try a few of these on your own. Figure out the sales tax and then add it to the original price for a new total.

Example A

What would you pay for a \$35.00 book if the sales tax is 5%?

Solution: \$36.75

Example B

What would you pay for a \$99.00 a night hotel room if the sales tax is 7%?

Solution: \$105.93

Example C

What is the cost of a \$42.50 item with a 2% sales tax

Solution: \$43.35

Back to the supermarket. Here is the original problem once again.

Well, if you think back to the last Concept, the customer saved a lot of money by shopping on the big discount day. In fact, the total cost for the customer's groceries was \$293.25.

However, that did not include a 5% sales tax.

Do you know what a sales tax is or how to calculate it?

First, we have to figure out what the sales tax would be on \$293.25. We do this by multiplying.

$$293.25 \times 5\%$$

To make the math simpler, we can convert the percent to a decimal.

5% becomes .05

Now we multiply.

$$293.25 \times .05 = 14.6625$$

We can say 14.66.

Now we add that to the original total cost.

$$293.25 + 14.66 = \$307.91$$

This is what the customer paid for the groceries.

Vocabulary

Here are the vocabulary words in this Concept.

Percent

a part of a whole 100, written using a % sign.

Proportion

two equal ratios.

Sales Tax

a percent added to a total

Discount

an amount taken off of an original price

Guided Practice

Here is one for you to try on your own.

Kelly and Jack bought tickets to the opera. Each ticket cost \$45.00 and there was an 8% sales tax on the total order. What did Kelly and Jack spend for their opera tickets?

Answer

To figure this out, we must first realize that we are purchasing two tickets and not one.

\$90.00 is the cost for two tickets.

Next, we figure out the sales tax by multiplying. Don't forget to convert the percent to a decimal.

$$90 \times .08 = \$7.20$$

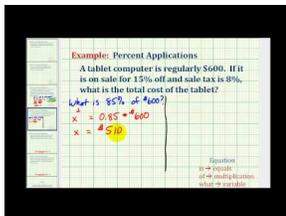
Next, we add that to the cost for two tickets.

$$90.00 + 7.20 = \$97.20$$

This is what Kelly and Jack spent on their tickets.

Video Review

Here is a video for review.

**MEDIA**

Click image to the left for more content.

[James Sousa:Example4: Percent Application Problem](#)

Practice

Directions: Calculate the total amount paid including sales tax if the sales tax is 4%.

1. Total: \$56.75
2. Total: \$43.25
3. Total: \$65.00
4. Total: \$25.50
5. Total: \$18.75
6. Total: \$59.00
7. Total: \$21.50
8. Total: \$44.50
9. Total: \$125.50

10. Total: \$430.00

11. Total: \$890.50

12. Total: \$998.35

13. Total: \$2,356.75

14. Total: \$3005.50

15. Total: \$5678.25