

"I Can Solve Real-World Problems by Applying Percents to Calculate Tax, Tip, and Discount."

Introducing Tax and Discount

When a store has a sale, you see advertisements for discounts. The discounts are usually given in percents (20% off, 30% off, etc.) Percents are helpful in many situations involving money. Discounts, taxes, and tips are all described with percents. Understanding how to compute and use these percents can make you a smarter consumer.



Determining Tax

What is tax?

$$7\% \text{ tax} = \text{---} = \text{---}$$

1. Jill wants to buy a CD that is priced at \$7.50. The sales tax is 8%. What will be the total cost of the CD?

2. Alexis bought a CD player. She does not remember the original price, but she does know that the 6% sales tax came to \$4.80. What was the original price of the CD player?

Determining Discount:

What is discount?

Jesse bought a pair of jeans for 25% off the original price.

Jesse will **save** _____ **or** _____ **off** the original price.

Jesse will **spend** _____ **or** _____ **of** the original price.

3. A sweater is regularly \$32. If it is 25% off the original price for the week, how much will the sweater cost?

4. At Loud Sounds Music, CD's are regularly priced at \$15.95. Today, the CD's are discounted 20% off the total price. If you decide to buy 5 CD's, how much money will you spend?

5. Masako has a \$25-off coupon on a purchase of \$100 or more at a department store. She buys a jacket with a price tag of \$125. What was the percent discount she got?

"I Can Solve Real-World Problems by Applying Percents to Calculate Tax, Tip, and Discount."

Introducing Tax and Discount

When a store has a sale, you see advertisements for discounts. The discounts are usually given in percents (20% off, 30% off, etc.) Percents are helpful in many situations involving money. Discounts, taxes, and tips are all described with percents. Understanding how to compute and use these percents can make you a smarter consumer.



Determining Tax

What is tax?

an amount + to the total price of an item

$$7\% \text{ tax} = \frac{7}{100} = \frac{\$ \text{ tax}}{\text{total cost}}$$

1. Jill wants to buy a CD that is priced at \$7.50. The sales tax is 8%. What will be the total cost of the CD?

$$\frac{8}{100} = \frac{x}{\$7.50}$$
$$100x = 60$$
$$\frac{100x}{100} = \frac{60}{100}$$
$$x = \$0.60$$

Total Cost

$$\begin{array}{r} \$7.50 \\ + 0.60 \\ \hline \$8.10 \end{array}$$

2. Alexis bought a CD player. She does not remember the original price, but she does know that the 6% sales tax came to \$4.80. What was the original price of the CD player?

$$\frac{6}{100} = \frac{\$4.80}{x}$$
$$480 = 6x$$
$$\frac{480}{6} = \frac{6x}{6}$$
$$80 = x$$

$$\$80 \text{ for the CD Player}$$

Determining Discount:

What is discount?

an amount subtracted
from the original price
of an item

Jesse bought a pair of jeans for 25% off the original price.

Jesse will **save** 25% or $\frac{25}{100}$ **off** the original price.

Jesse will **spend** 75% or $\frac{75}{100}$ **of** the original price.

3. A sweater is regularly \$32. If it is 25% off the original price for the week, how much will the sweater cost?

$$\begin{array}{r} \frac{25}{100} = \frac{x}{32} \\ 100x = 800 \\ \div 100 \\ x = 8 \end{array}$$

$$\begin{array}{r} \$32 \\ - 8 \\ \hline \end{array}$$

\$24 sale price for the sweater

4. At Loud Sounds Music, CD's are regularly priced at \$15.95. Today, the CD's are discounted 20% off the total price. If you decide to buy 5 CD's, how much money will you spend?

$$5 \times \$15.95 = \$79.75$$

$$\begin{array}{r} \frac{20}{100} = \frac{x}{79.75} \\ 100x = 1595 \\ \div 100 \\ x = 15.95 \end{array}$$

$$\begin{array}{r} 79.75 \\ - 15.95 \\ \hline \end{array}$$

\$63.80 sale price

5. Masako has a \$25-off coupon on a purchase of \$100 or more at a department store. She buys a jacket with a price tag of \$125. What was the percent discount she got?

$$\begin{array}{r} \frac{x}{100} = \frac{25}{125} \\ 125x = 2500 \\ \div 125 \\ x = 20 \end{array}$$

20% discount