

Prices Involving Discounts

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CONCEPT 1 Prices Involving Discounts

Here you'll learn to find prices involving discounts.

Have you ever shopped at a sale? Take a look at this dilemma.



The supermarket is having a special discount day in honor of its one year anniversary. On Saturday, discount day will begin and every customer will receive 15% off of his/her total order. Saturday, the store is full of customers. There are free balloons being given out to the children along with coffee and donuts for the parents. Everyone is in a terrific mood and business is booming. Many people are making large purchases. Mr. Kemp is excited to see how much business the store is getting, but at the same time he can't help thinking about the profit he is losing by offering the 15% discount. Mr. Kemp peers over the service desk to hear one of the girls at the cash register say, "Well, your total is \$345.00 before the discount." Then the girl showed the customer her new total. The customer paid and left, smiling to Mr. Kemp as she passed by.

If this is the total before the discount, how much did the customer end up paying? How much money did the store lose by offering such a discount?

You will learn how to figure out this problem in this Concept about discounts.

Guidance

Figuring out a *discount* is a time when we use a percent in a real life situation. A discount is an amount of money that is taken off of the original price. Think about shopping! We use discounts all the time when we shop. In fact, we often use mental math to figure out a discount.

We can find a discount and then a final price of the item we are purchasing. This involves two steps.

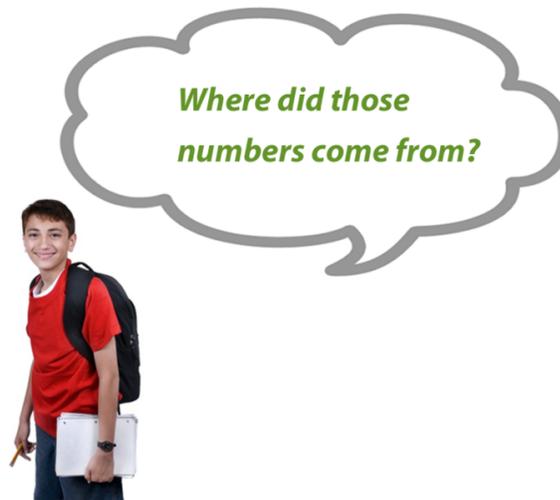
1. **Figure out the amount of the discount**
2. **Subtract that amount from the original price**

How do we figure out the amount of a discount?

Tracy went shopping for a new pair of sneakers. She chose a pair of blue ones that were \$58.00. The sign said that they were 15% off of the original price. What is the amount of the discount? How much did Tracy end up paying for the sneakers?

Our first step is to figure out the amount of the discount.

We need to find 15% of 58.



Good question! The original price of the sneakers is \$58.00. The percent of the discount is 15%, so we can write that we need to find 15% of 58. That will give us the amount of money that Tracy did not have to pay. Let's multiply to find the amount of the discount.

$$\begin{array}{r}
 15\% \text{ of } 58 = 58 \\
 \times .15 \\
 \hline
 290 \\
 + 58 \\
 \hline
 8.70
 \end{array}$$

The amount of the discount is \$8.70. Now we can subtract the amount of the discount from the original sales price and we will know how much Tracy paid for the sneakers.

$$\begin{array}{r}
 58.00 \\
 - 8.70 \\
 \hline
 \$49.30
 \end{array}$$

Tracy paid \$49.30 for the sneakers.

Figure these out on your own. First figure out the amount of the discount, then figure out the new price.

Example A

If a \$50.00 shirt is 25% off, how much would you pay for the shirt?

Solution: \$37.50

Example B

If a video game that usually costs \$45.50 is 30% off, how much would you pay for the game?

Solution: \$31.85

Example C

What was the amount of the discount on the video game?

Solution: \$13.65

Mr. Kemp is having a difficult time thinking about all of the money that he is losing by offering discount day at the grocery store. Here is the original problem.

The supermarket is having a special discount day in honor of its one year anniversary. On Saturday, discount day will begin and every customer will receive 15% off of his/her total order.

Saturday, the store is full of customers. There are free balloons being given out to the children along with coffee and donuts for the parents. Everyone is in a terrific mood and business is booming.

Many people are making large purchases. Mr. Kemp is excited to see how much business the store is getting, but at the same time he can't help thinking about the profit he is losing by offering the 15% discount.

Mr. Kemp peers over the service desk to hear one of the girls at the cash register say, "Well, your total is \$345.00 before the discount." Then the girl showed the customer her new total. The customer paid and left, smiling to Mr. Kemp as she passed by.

If this is the total before the discount, how much did the customer end up paying? How much money did the store lose by offering such a discount?

There are two questions to answer in solving this problem. First, we need to figure out the amount of the discount given the total and the 15% off.

$$345 \times .15 = \$51.75$$

The discount is \$51.75.

This is the amount that the store lost.

What did the customer end up paying?

To figure this out, we take the discount and subtract it from the original total.

$$345 - 51.75 = \$293.25$$

WOW!! That customer saved a lot of money by shopping on discount day!

Vocabulary

Here are the vocabulary words in this Concept.

Percent

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

Proportion

two equal ratios.

Discount

an amount taken off of an original price

Guided Practice

Here is one for you to try on your own.

Kara bought a new pair of sneakers. The original price of the sneakers was \$65.50. There was a 15% discount on the sneakers.

What was the amount of the discount? How much did Kara pay for the sneakers?

Answer

To begin, we have to figure out the amount of the discount. First, we change the percent of the discount to a decimal.

15% becomes .15

Next, we multiply by \$65.50.

The amount of the discount was \$9.83.

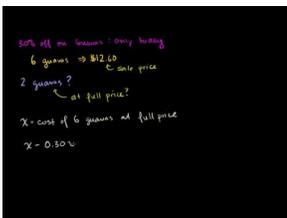
We can subtract that from the original price.

$$65.50 - 9.83 = 55.67$$

Kara spent \$55.67 on the sneakers.

Video Review

Here is a video for review.



MEDIA

Click image to the left for more content.

[KhanAcademyFindingFull Price whenyouknow the DiscountedPrice](#)

Practice

Directions: Calculate each new price based on the discount and the original price.

1. Original price: \$19.95, discount 15%
2. Original price: \$20.00, discount 50%
3. Original price: \$35.50, discount 10%
4. Original price: \$50.00, discount 30%
5. Original price: \$100.00, discount 20%
6. Original price: \$75.00, discount 30%
7. Original price: \$29.95, discount 20%
8. Original price: \$18.00, discount 10%
9. Original price: \$47.50, discount 10%
10. Original price: \$75.00, discount 30%
11. Original price: \$125.00, discount 20%
12. Original price: \$225.50, discount 10%
13. Original price: \$456.00, discount 25%

14. Original price: \$530.00, discount 30%

15. Original price: \$750.00, discount 12%