
I can solve real-world percent problems.

Discounts

To calculate discounts and/or multiple discounts:

Step 1: Find the percent you're paying (by subtracting from 100)

Step 2: Change percent to decimal and multiply by original

Step 3: Repeat for multiple discounts

Example 1:

What is the cost of a \$15 pizza if it is 30% off?

$$0.70 \cdot 15 = \$10.50$$

Example 2 (You Try):

What is the cost of a \$56.80 stereo marked down 15%?

$$0.85 \cdot 56.80 = \$48.28$$

Example 3:

The original price of a camera was \$60. It was on sale at a 20% discount. Later, the price of the camera was reduced by an additional 25% of the sale price.

What was the final price of the camera?

$$0.80 \cdot 60 = \$48$$

$$0.75 \cdot 48 = \text{\$36}$$

Example 4 (You Try):

Clarence bought a pair of jeans that were on sale for 25% off, plus an additional 10% off the marked down price. The original price of the jeans was \$40.

What was the final price of the jeans?

$$0.75 \cdot 40 = \$30$$

$$0.90 \cdot 30 = \text{\$27}$$

Example 5:

Jackson wants to buy a television. The television is \$800 but is marked 10% off. He sees an ad in the paper that reads "get an additional 20% off any already marked down prices." Jackson thinks this means he will get 30% off of \$800. Is he correct or incorrect, and why? Use mathematics to prove your answer.

$$800 \cdot 0.90 = \$720$$

$$0.80 \cdot 720 = \$576$$

$$800 \cdot 0.70 = \$560$$

They are not the same.

Tax and Discount

Step 1: Calculate the sale price.

Step 2: Calculate the sales tax based on the sale price.

Step 3: Add tax to total.

Example 1:

A pair of jeans that you want to buy costs \$24.00. The jeans are on sale for 15% off. Sales tax is 7% added to the price. What will the total be at the checkout?

What is the discounted price? \$20.40

What is 7% of the discounted price \$1.43

What is your final total at checkout \$21.83

Example 2 (You Try):

Aimee is decorating her new house. She found a table at Pier One for \$425. If the table is 25% off and she has to pay a 6% tax, what will be her final price at checkout?

What is the discounted price? \$318.75

What is 7% of the discounted price \$22.31

What is your final total at checkout \$341.06

Mixed Review (You Try ALL):

1.) A salesman earns 5% commission. If he sold \$180 in product, how much does the salesman make?

$$\$180 \cdot 0.05 = \$9$$

2.) A sweatshirt is on sale for \$20.80. If the sweatshirt was marked down 20%, what was the original price?

$$0.80x = 20.80$$

$$\$26$$

3.) If you began the week with \$160 and ended the week with \$94, what was the percent change?

$$\frac{66}{160} = 41\%$$

decrease

4.) A pizza is ordered for delivery. The worker says it will cost \$18 plus tax. If there is a 7% tax, and they plan to tip the driver 10%, what is the total amount paid?

$$18 \cdot 1.07 = \$19.26$$

$$19.26 \cdot 0.10 = \$1.93$$

$$\$21.19$$

5.) Kohl's marks up their socks 80% to make a profit. If the socks are sold for \$5.40, what is the original price of the socks?

$$1.80x = 5.40$$

$$\$3$$

6.) Last year at Waynesville Middle School, there were 200 students on Honor Roll. If the school hopes to improve this number by 20%, how many students should be on Honor Roll next year?

$$200 \cdot 1.20 = 240$$

students