

Math 7H - Unit 4

Day 6 - Discount

Lesson Objectives:

- I can use proportional relationship to solve percent problems involving discounts.

Stores and other businesses often have discounts on their products. **Discount**, or markdown, is the amount by which the regular price of an item is reduced. The sale price is the regular price minus the discount.

There are two ways to calculate discount.

A pair of shoes normally sells for \$55. This weekend it's on sale for 25% off. Find the discounted price.

Method 1

Find the amount discounted.
Subtract the discount from the original price to get the sale price.

$$\begin{aligned} a &= pw \\ a &= 0.25(55) \\ a &= 13.75 \end{aligned}$$

You saved \$13.75.

$$55 - 13.75 = 41.25$$

You paid \$41.25 for the pair of shoes.

A pair of shoes normally sells for \$55. This weekend it's on sale for 25% off. Find the discounted price.

Method 2

Subtract the percent saved from 100% to get the percent paid. Then use the percent paid to find the discounted price.

$$\begin{aligned} 100\% - 25\% &= 75\% \\ a &= pw \\ a &= 0.75(55) \\ a &= 41.25 \end{aligned}$$

You will pay 75% of the original price for the shoes.

You paid \$41.25 for the pair of shoes.

A book normally costs \$18.50. It's currently on sale for 45% off. How much is the sale price?

$$\begin{aligned} a &= .45(18.50) \\ a &= 8.325 \\ 18.50 - 8.325 &= 10.175 = \$10.18 \end{aligned}$$

A CD costs \$24.99. You have a coupon for 10% off of any CD.

How much is the sale price?

$$\begin{aligned} a &= .10(24.99) \\ a &= 2.499 \\ 24.99 - 2.499 &= 22.49 \end{aligned}$$

$$\begin{aligned} 100 - 45 &= 55\% \\ a &= .55(18.50) \\ a &= \$10.18 \end{aligned}$$

$$\begin{aligned} 100 - 10 &= 90\% \\ a &= .90(24.99) \\ a &= \$22.49 \end{aligned}$$

Rosa buys a cell phone that is on sale for 60% off. If the sale price is \$79.98, what is the original price?

$$\begin{aligned} a &= pw \\ 79.98 &= .40w \\ \frac{79.98}{.40} &= \frac{.40w}{.40} \\ \$199.95 &= w \end{aligned}$$

100%
40%
60%

The discount on a pair of tennis shoes is 15%. The shoes are sale for \$17. What is the original price of the tennis shoes?

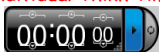
$$\begin{aligned} 100 - 15 &= 85\% \\ 17 &\div .85 = \$20 \end{aligned}$$

$$\begin{aligned} a &= pw \\ 17 &= .85w \\ \frac{17}{.85} &= \frac{.85w}{.85} \\ \$20 &= w \end{aligned}$$

Homework

Discount WKS

* Individual Think Time *

**What to do if you get stuck...**

- Reread the problem. Did you write it down correctly?
- Reread your notes. Is there a problem similar that we did together in class?
- Find a problem similar in your book. Try this one to see if it helps.
- Skip the problem until the end of Individual Think Time. Then ask an "educated" question of a neighbor or Mrs. Call.

Today we're working by...

