## Finding the Discount on an Item

**Discount** is the difference between the "regular" retail price of an item and the price that a consumer actually pays for the item.

**Study Tip**

Notice that for markup percent, the wholesale price is the base. However, for discount percent, the regular price is the base.

### Finding a Discount

The discount on an item is the difference between the regular retail price and the discounted, or sale, price.

$$\text{Discount} = \text{regular price} - \text{discounted price}$$

To find the **discount percent,** divide the discount by the regular price.

$$\text{Discount percent} = \frac{\text{discount}}{\text{regular price}}$$


### EXAMPLE 3 Using Discounts and Markup

You work in a clothing store. You order 25 T-shirts in assorted sizes. The wholesale price of each shirt is \$8.37. The regular retail price is \$24.99. During the next 2 months, you repeatedly mark down the price until you finally sell all 25 shirts. Find the average markup percent for the 25 shirts.

- 13 shirts at \$24.99
- 6 shirts at 50% off
- 4 shirts at 25% off
- 2 shirts at 75% off

#### SOLUTION

A spreadsheet works well to organize this problem.

DATA

| | A | B | C | D | E | |
|---|---|---|---|---|---|---|
| 1 | **Wholesale Price** | **Regular Price** | **Discount Percent** | **Discount Price** | **Quantity Sold** | **Revenue** |
| 2 | \$8.37 | \$24.99 | 0.0% | \$24.99 | 13 | \$324.87 |
| 3 | \$8.37 | \$24.99 | 25.0% | \$18.74 | 4 | \$74.96 |
| 4 | \$8.37 | \$24.99 | 50.0% | \$12.50 | 6 | \$75.00 |
| 5 | \$8.37 | \$24.99 | 75.0% | \$6.25 | 2 | \$12.50 |
| 6 | **Total** | | | | | **\$487.33** |
| 7 | | | | | | |

You paid $25(8.37) = \$209.25$ for the shirts. Your total markup was $487.33 - 209.25 = \$278.08$. So, your average markup percent was

$$\frac{\text{Total markup}}{\text{Total wholesale price}} = \frac{278.08}{209.25} \approx 1.329 = 132.9\%.$$

**Checkpoint**

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Find the average markup percent for the following sales record.

- 11 shirts at \$24.99
- 3 shirts at 50% off
- 7 shirts at 25% off
- 4 shirts at 75% off