

Calculating Markup: A Merchandising Tool

Part 4: 4-5 Calculating Markdowns

Since markdowns are a downward adjustment in retail selling price, they greatly impact inventory levels, sales volume, and profit. Therefore, retailers must meticulously monitor and accurately calculate markdowns to meet the sales plan and to realize adequate profit. In fact, inaccurate calculations of markdowns can actually cause inventory shrinkage. It is very important that statistical data reflects the day-to-day operations of the retail store.

Consumers think of reduced price or markdown merchandise as a percent off of the original or regular retail price of the merchandise, while the retailer views markdowns as a dollar amount downward adjustment in retail price and inventory. As previously discussed, retailers must decide upon the amount or percentage of reduction in price and take the markdown in a timely manner in order to meet consumers' expectations of the value of the product.

It is customary for the retailer to begin with a 20 % to 25 % markdown and sell as much merchandise as possible at that reduced price. The goods not selling are then reduced to 33 & 1/3 % percent off and then to one half of retail price or below.

The formulas for calculating markdowns and markdown percents are as follows:

Calculating Markdown Price:

$$\text{Markdown \$} = \text{Original Retail \$} \times \text{Reduction Percent}$$

$$\text{New Retail Price \$} = \text{Original Retail Price \$} - \text{Markdown \$}$$

Calculating Markdown Dollars:

$$\text{Markdown \$} = \text{Current Retail \$} - \text{New Retail \$}$$

$$\text{Total Markdown \$} = \text{Current Retail \$} - \text{New Retail \$} \times \# \text{ of Markdown Units}$$

Calculating Markdown Percent:

$$\text{Markdown \%} = \text{Markdown \$} \div \text{Net Sale \$}$$

$$\text{Net Sales \$} = \text{Retail Price \$} \times \# \text{ Units Sold}$$

Example:

The merchandise manager of the store requested that the buyer prepare for a weekend special promotional sale. After looking at sales figures and product classifications the buyer decided to run a 25% off sale on some trendy cotton blouses and cotton blend shirts. The buyer submitted the following plan to the merchandise manager:

- In the Missy Sportswear Department, he would advertise a 25% off weekend sale on a select group of trendy cotton blend shirts and cotton blouses.
- The buyer reduced 24 cotton blouses originally retailing at \$56.00 and 18 cotton blend shirts originally priced at \$48.00 for the 25% off sale.

The retail sales promotion was very successful.

- The buyer sold 18 of the 24 blouses at the 25% off retail price for \$42.00 each and 10 of the 18 shirts at the 25% off retail price for \$36.00 each.
- All of the remaining blouses and shirts sold at a second reduction of 33 & 1/3% off.

Note: Markdown percent is usually calculated over a given period of time, for a department or store rather than on one group of items and is based on net sales for that same period of time. However, for this example we will use a grouping of items.

Use the following 3 Step method to calculate the markdown price, the new retail price, the total markdown dollars, and markdown percent:

Step 1. Calculate the markdown price.

$$\text{Markdown \$} = \text{Original Retail \$} \times \text{Reduction \%}$$

$$\text{New Retail Price \$} = \text{Original Retail Price \$} - \text{Markdown \$}$$

Step 2. Calculate Markdown dollars.

$$\text{Markdown \$} = \text{Current Retail \$} - \text{New Retail \$}$$

$$\text{Total Markdown \$} = \text{Current Retail \$} - \text{New Retail \$} \times \# \text{ Markdown Units}$$

Step 3. Calculate Markdown Percent

$$\text{Net Sales \$} = \text{Retail \$} \times \# \text{ Units Sold (at each reduced price)}$$

$$\text{Markdown \%} = \text{Markdown \$} \div \text{Net Sales \$}$$

Step 1: Calculating Markdown Price:

Calculate the markdown \$ on item.

$$\text{Markdown \$} = \text{Original Retail \$} \times \text{Reduction Percent}$$

$$\text{Markdown \$ Blouses} = \$56.00 \times 25\% (.25)$$

$$\text{Markdown \$ Blouses} = \mathbf{\$14.00}$$

$$\text{Markdown \$ Shirts} = \$48.00 \times 25\% (.25)$$

$$\text{Markdown \$ Shirts} = \mathbf{\$12.00}$$

Calculate new retail price.

$$\text{New Retail Price \$} = \text{Original Retail Price \$} - \text{Markdown \$}$$

$$\text{New Retail Price Blouse} = \$56.00 - \$14.00$$

$$\text{New Retail Price Blouse} = \mathbf{\$42.00}$$

$$\text{New Retail Price Shirt} = \$48.00 - \$12.00$$

$$\text{New Retail Price Shirt} = \mathbf{\$36.00}$$

Step 2. Calculating Markdown Dollars:

Calculate total markdown dollars.

$$\text{Total Markdown \$} = \text{Current Retail \$} - \text{New Retail \$} \times \# \text{ of Markdown Units}$$

$$\text{Total Markdown \$ Blouse} = \$56.00 - \$42.00$$

$$\text{Total Markdown \$ Blouse} = \$14.00 \times 24$$

$$\text{Total Markdown \$ Blouse} = \mathbf{\$336.00}$$

Total Markdown \$ Shirts = \$48.00 - \$36.00

Total Markdown \$ Shirts = \$12.00 × 18

Total Markdown \$ Shirts = **\$216.00**

(*For first markdown, Current Retail \$ is the Original Retail \$)

Calculate total markdown dollars for all items reduced at 25% off.

Total Markdown \$ = Total Markdown \$ Item A + Item B

Total Markdown \$ = \$336.00 + \$216.00

Total Markdown \$ = **\$552.00**

Example Review

Note: At the 25% off price, the buyer sold 18 of the reduced blouses at the reduced sales price of \$42.00 and 10 of the reduced shirts at \$36.00. Now the buyer must determine how many blouses and shirts are left to reduce and what the new retail price will be at 33 & 1/3% off, as well as the total amount of markdown dollars accumulated at the new retail price.

Also Note: All the remaining blouses and shirts sold at the 33 & 1/3% off price.

How many **remaining blouses and shirts** were reduced to 33 & 1/3% off? Use the following mathematical formula to determine the remainder left.

- Total Blouses = **24**
 - Blouses Sold at 25% off = **18**
 - Remaining Blouses = Total # - # sold
= 24 - 18 or **6 blouses remaining**
- Total Shirts = 18
 - Shirts Sold at 25% off = **10**
 - Remaining Shirts = Total # - # sold
= 18 - 10 or **8 shirts remaining**

Now, the buyer must calculate the markdown price and markdown dollars for the remaining merchandise that is being reduced to 33 & 1/3% off.

Steps 1 and 2 must be repeated to calculate those unknowns.

Calculating Markdown Price and Markdown Dollars for Remaining Cotton Blouses and Cotton Blend Shirts

Step 1: Calculating Markdown Price:

Calculate the markdown \$ on item.

Markdown \$ = Original Retail \$ × Reduction Percent

Markdown \$ Blouses = \$56.00 × 33 & 1/3% (.3333)

Markdown \$ Blouses = **\$18.67**

Markdown \$ Shirts = \$48.00 × 33 & 1/3% (.3333)

Markdown \$ Shirts = **\$16.00**

Calculate new retail price.

New Retail Price \$ = Original Retail Price \$ – Markdown \$

New Retail Price Blouse = \$56.00 - \$18.67

New Retail Price Blouse = **\$37.33**

New Retail Price Shirt = \$48.00 - \$16.00

New Retail Price Shirt = **\$32.00**

Step 2. Calculating Markdown Dollars:

Calculate total markdown dollars.

Total Markdown \$ = Current Retail \$ - New Retail \$ × # of Markdown Units*

Total Markdown \$ Blouse = \$42.00 - \$37.33

Total Markdown \$ Blouse = \$4.67 × 6

Total Markdown \$ Blouse = **\$28.02**

Total Markdown \$ Shirts = \$36.00 - \$32.00

Total Markdown \$ Shirts = \$4.00 × 8

Total Markdown \$ Shirts = **\$32.00**

(*Remember, the markdown dollars on the above blouses and shirts have already been recorded for the original price to 25% off so only the difference between the 25% off and 33 & 1/3% off need to be calculated and recorded for the 33 & 1/3% off.)

Calculate total markdown dollars for all items reduced at 33 & 1/3% off.

Total Markdown \$ = Total Markdown \$ Item A + Item B

Total Markdown \$ = \$28.02 + \$32.00

Total Markdown \$ = **\$60.02**

Step. 3 Calculating Markdown Percent:

Note: Step 3 is calculated with figures from both the 25% off and the 33 & 1/3% off merchandise.

Calculate net sales dollars.

Net Sales \$ = Retail \$ × # Unit Sold (at 25% off)

Net Sales \$ Blouse = \$42.00 × 18

Net Sales \$ Blouse = **\$756.00**

Net Sales \$ = Retail \$ × # Unit Sold (at 25% off)

Net Sales \$ Shirt = \$36.00 × 10

Net Sales \$ Shirt = **\$360.00**

Net Sales \$ Blouse and Shirt = \$756.00 + \$360.00

Net Sales \$ Blouse and Shirt = **\$1,116.00**

Net Sales \$ = Retail \$ × # Unit Sold (at 33 & 1/3% off)

Net Sales \$ Blouse = \$37.33 × 6

Net Sales \$ Blouse = **\$223.98**

Net Sales \$ Shirt = \$32.00 × 8

Net Sales \$ Shirt = **\$256.00**

Net Sales \$ Blouse and Shirt = \$223.98 + \$256.00

Net Sales \$ Blouse and Shirt = **\$479.98**

**Net Sales \$ = Net Sales \$ Blouse and Shirt (at 25% off) + Net Sales \$ Blouse and Shirt
(at 33.33% off)**

Net Sales \$ = \$1,116.00 + \$479.98

Net Sales \$ = **\$1,595.98**

Calculate total markdown percent.

Total Markdown \$ = Total Markdown \$ Item A + Item B

Total Markdown \$ = (\$336.00 + \$28.02) + (\$216.00 + \$32.00)

Total Markdown \$ = \$364.02 + \$248.00

Total Markdown \$ = **\$612.02**

Markdown % = Markdown \$ ÷ Net Sale \$

Markdown % = \$612.02 ÷ \$1,595.98

Markdown % = **38.35%**

In summary, the markdown percent is usually calculated over a given period of time, for a department or store rather than on one group of items and is based on net sales for that same period of time. Markdowns are planned as a guide, not a goal, and are based on the amount of price adjustment needed to sell the merchandise in order to meet planned sales for each month and a profit for the store. Astute retailers establish organized markdown policies in the daily operations of the store in order to minimize markdowns. Recording of markdowns and accurate calculations of markdown dollars are most important as they impact the net sales and bottom line of the retailer.