

12.4: Break-Even Point

Learning Objectives

- Calculate the break-even point for retail product sales

When we bring the topic of break-even analysis in to our discussion, we will need to add some additional components to our thinking. A retailer will need to understand that there is more than just selling an item for more than it costs (or even the added cost of acquiring the product and having it transported to the retailer and further distributed to stores or direct to customers).

The components **gross margin dollars**, **gross margin percent**, and **fixed costs** are needed to calculate a break-even situation.

Gross margin dollars is the raw profit of retail items after they have been sold. In most retail accounting methods, the gross margin dollar calculation is markup multiplied by units sold minus price adjustments and shrinkage. For example, a retailer buys 1,000 units of dog food at \$10.00 and prices it at \$20.00. After the 1,000 units have sold, \$10,000 gross margin dollars have been generated ($\$20 - \$10 = \$10 * 1,000 \text{ units} = \$10,000$). Now, some of the dog food was sold at a sale price of \$15.00 during a promotional event. The difference between the regular price of \$20.00 and the sale price of \$15.00 is calculated based on the units sold at that event. If 200 units were sold on sale then \$1,000 ($200 * \5.00) would be subtracted from the gross margin dollar figure as a price adjustment. Also, retailers account for a variable called shrinkage which consists of damaged, lost or stolen merchandise. It is usually a small fixed percentage that is applied to all sales items across the board, say 2.5% for the sake of our discussion. Therefore, the gross margin dollars generated by the dog food product would be:

Sales dollars generated = \$20,000

Minus price adjustments – \$1,000

Minus shrinkage (2.5%) –\$ 250

Gross margin dollars = \$18,750

Next we need gross margin percent. It is calculated much in the same way as markup percentage:

Gross margin percent = $\text{Gross margin dollars} - \text{cost} / \text{sales dollars generated}$

In this example, we take $(\$18,750 - \$10,000 = \$8,750) / \$20,000 = .4375$ or 43.8%.

To calculate break-even point sales, we use:

Break-even point sales = $\text{Fixed Costs} / \text{Gross Margin Percentage}$

If our monthly expenses are \$25,000 per year, then:

Break-even point = $\$25,000 / .4375$

= \$57,143

In our example, a retailer would have to generate \$57,143 in product sales to break-even.

Practice Questions

<https://assessments.lumenlearning.co...sessments/9277>

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