

Finance – 10 Basic Retail Math Formulas



Cost of Goods Sold (COGS)

$$\text{Beginning Inventory} + \text{Purchases} - \text{Ending Inventory} = \text{COGS}$$



Gross Margin

$$\text{Total Sales} - \text{COGS} = \text{Gross Margin}$$



Gross Margin Return on Investment (GMROI) Percent

$$\text{Gross Margin} \div \text{Average Inventory Cost} \times 100 = \text{GMROI}\%$$



Markup

$$\text{Retail Price} - \text{Cost of Goods Sold (COGS)} = \text{Markup}$$



Markdown

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



Stock to Sales Ratio

$$\text{Beginning Inventory} \div \text{Ending Inventory} = \text{Stock to Sales Ratio}$$



Sell Thru Percentage

$$\text{Number of Items Sold} \div \text{Beginning of the Month (BOM) Inventory} = \text{Sell Thru \%}$$



Inventory Turnover Rate

$$\text{COGS} \div \text{Average Inventory Value} = \text{Inventory Turnover Rate}$$



Inventory Shrinkage

$$\text{Booked Inventory} - \text{Physical Inventory} = \text{Inventory Shrinkage}$$



Operating Expense Ratio (OER)

$$\text{Operating Costs} \div \text{Sales} = \text{Operating Expense Ratio (OER)}$$

