

Finance – Inventory Management Formulas



Cost of Goods Sold (COGS)

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



Beginning Inventory

$$(\text{COGS} + \text{Ending Inventory}) - \text{Cost of Inventory Purchases} = \text{Beginning Inventory}$$



Inventory Turnover Rate

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



Ending Inventory

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



Recorded Inventory

$$\text{Inventory} - \text{Cost of Goods Sold} = \text{Recorded Inventory}$$



Inventory Shrinkage Rate

$$(\text{Recorded Inventory} - \text{Actual Inventory}) \div \text{Recorded Inventory} = \text{Inventory Shrinkage Rate}$$



Gross Margin

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



Gross Margin Return on Investment (GMROI)

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



Gross Margin Return on Investment (GMROI) Percent

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



Gross Profit

$$\text{Sales Revenue} - \text{COGS} = \text{Gross Profit}$$

