

Let's look at Hector's income statement again. Assuming his unit of sale is one tie, what is Hector's gross profit per unit?

Hector sells each tie for \$4. His cost of goods sold for each tie is \$2. His gross profit per unit, therefore, is $\$4 - \$2 = \$2$.

Calculating Break-Even Units

Because many small business operating costs are fixed, break-even is typically calculated by assuming that *all* operating costs are fixed. Using his gross profit per unit, Hector can calculate how many ties he will have to sell each month to cover his fixed costs. This simple formula divides gross profit per unit into monthly fixed costs to determine break-even units:

$$\frac{\text{Monthly Fixed Costs}}{\text{Gross Profit per Unit}} = \text{Break-Even Units}$$

$$\frac{\$24 \text{ (Monthly Fixed Costs)}}{\$2 \text{ (Gross Profit per Unit)}} = 12 \text{ Break-Even Units}$$

Hector has to sell twelve ties each month to stay in business. If he sells fewer than twelve ties, he will suffer a net loss. If he sells more than twelve ties, he will earn a net profit.

Including Variable Cost in Break-Even Analysis

Most young entrepreneurs' businesses don't have variable costs, but if you want to calculate break-even units including variable costs, you must first determine your variable cost per unit. Then, use this formula to figure your break-even units:

$$\frac{\text{Monthly Fixed Costs}}{\text{Gross Profit per Unit} - \text{Variable Cost per Unit}} = \text{Break-Even Units}$$

A shoe store has the following costs:

Variable Cost per Unit: \$1 (sales commission
per pair of shoes sold)