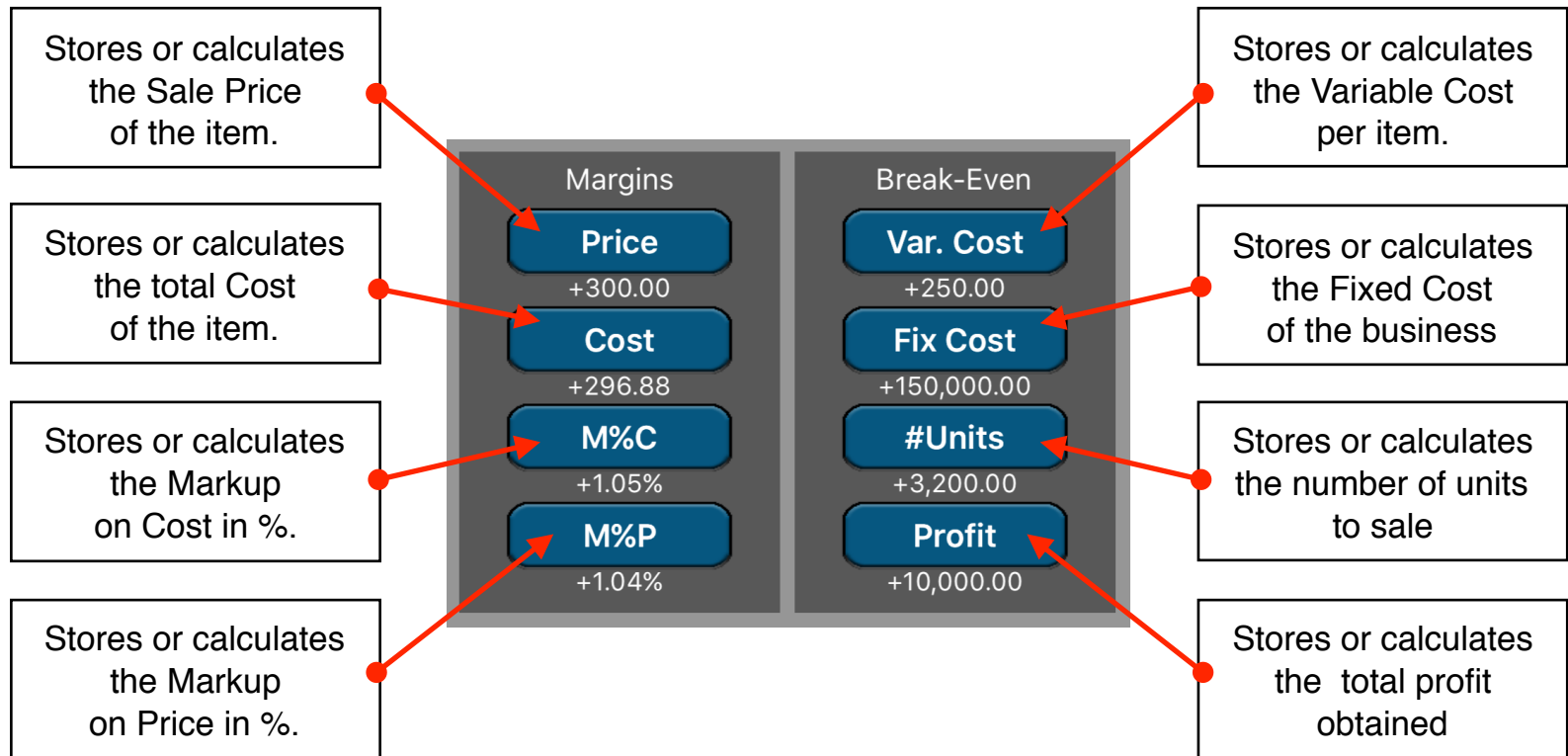


Margins & Break-Even Tool

This tool implements a quick way to calculate business margins and break-even analysis. To show it, touch the **OPT** and select “**Business**” and “**Margins & Break-Even**” option.



The calculation solves, for any of the variables, using the following formulas:

$$\text{M}\%C = 100 \cdot (\text{Price} - \text{Cost}) / \text{Cost}$$

$$\text{M}\%P = 100 \cdot (\text{Price} - \text{Cost}) / \text{Price}$$

$$\text{Profit} = (\text{Price} - \text{Var.Cost}) \cdot \text{\#Units} - \text{Fix.Cost}$$

$$\text{Cost} = \text{Var.Cost} + (\text{Fix.Cost} / \text{\#Units})$$

Any Variable value is stored or calculated depending on the previous button sequence. In this way, the actions performed by each button summarizes as follows:

Button	Performed Actions
[Price]	<p>If previous key was [M%C] calculates : Price = Cost • (1 + M%C / 100)</p> <p>If previous key was [M%P] calculates : Price = Cost ÷ (1 - M&P / 100).</p> <p>If previous key was [Profit], [Var.Cost], [Fix.Cost] or [#Units], calculates : Price = (Profit + Fix.Cost) ÷ #Units + Var.Cost</p> <p>In all other cases the displayed number is stored in the 'Price' variable.</p>
[Cost]	<p>If previous keys contains [Price] and [M%C] Calculates : Cost = Price ÷ (1 + M%C / 100)</p> <p>If previous keys contains [Price] and [M%P] Calculates : Cost = Price • (1 - M&P / 100).</p> <p>If previous key was [Profit], [Var.Cost], [Fix.Cost] or [#Units], calculates : Cost = Var.Cost + Fix.Cost / #Units</p> <p>In all other cases the displayed number is stored in the 'Cost' variable.</p>
[M%C]	<p>If previous key was [Price] or [Cost] Calculates : M%C = 100 • (Price - Cost) / Cost</p> <p>In all other cases the displayed number is stored in the 'M%C' variable.</p>
[M%P]	<p>If previous key was [Price] or [Cost] Calculates : M%P = 100 • (Price - Cost) / Price</p> <p>In all other cases the displayed number is stored in the 'M%P' variable.</p>
[Var.Cost]	<p>If previous key was [Price], [Fix.Cost], [#Units] or [Profit] Calculates : Var.Cost = Price - (Profit + Fix.Cost) / #Units</p> <p>In all other cases the displayed number is stored in the 'Var.Cost' variable.</p>
[Fix.Cost]	<p>If previous key was [Price], [Var.Cost], [#Units] or [Profit] Calculates : Fix.Cost = (Price - Var.Cost) • #Units - Profit</p> <p>In all other cases the displayed number is stored in the 'Fix.Cost' variable.</p>
[#Units]	<p>If previous key was [Price], [Fix.Cost], [Var.Cost] or [Profit] Calculates : #Units = (Profit + Fix.Cost) / (Price - Var.Cost)</p> <p>In all other cases the displayed number is stored in the '#Units' variable.</p>
[Profit]	<p>If previous key was [Price], [Fix.Cost], [Var.Cost] or [#Units] Calculates : Profit = (Price - Var.Cost) • #Units - Fix.Cost</p> <p>In all other cases the displayed number is stored in the 'Profit' variable.</p>

Example 1:

The sale price of an item is \$300.00, the cost of production per unit is \$250.00, and the monthly fixed cost of the business is \$150,000.00. How many units would have to be sold for break-even? and for profit of 10,000.00?

Keystrokes	Description
Type 300 [Price]	Stores the sale price of the item.
Type 250 [Var.Cost]	Stores the variable cost of the item.
Type 150000 [Fix.Cost]	Stores the fixed cost of the business.
Type 0 [Profit]	Stores the "0" profit (break-even).
[#Units]	Calculates the number of units to be sold for break-even. #Units = \$3,000 items
Type 10000 [Profit]	Stores the the target profit.
[#Units]	Calculates the number of units to be sold for target profit. #Units = \$3,200 items

What is the total cost per unit for break-even and for a profit of \$10,000.00?

Keystrokes	Description
Type 0 [Profit][#Units]	Stores the "0" profit (break-even). Calculates #Units
[Cost]	Calculates the total cost per item for break-even. Cost = \$300.00 per item.
Type 10000 [Profit][#Units]	Stores the "10,000" profit . Calculates #Units
[Cost]	Calculates the total cost per item for the target profit. Cost = \$296.88 per item.

Example 2:

The cost of an item is \$9.60, with a 15% of mark-up on cost calculate the sale price and the mark-up on price.

Keystrokes	Description
Type 9.6 [Cost]	Stores the cost of the item.
Type 15 [M%C]	Stores the mark-up on cost of the item.
[Price]	Calculates the sale price of the item. Price = \$11.04
[M%P]	Calculates the mark-up on price. M%P = 13.04%