



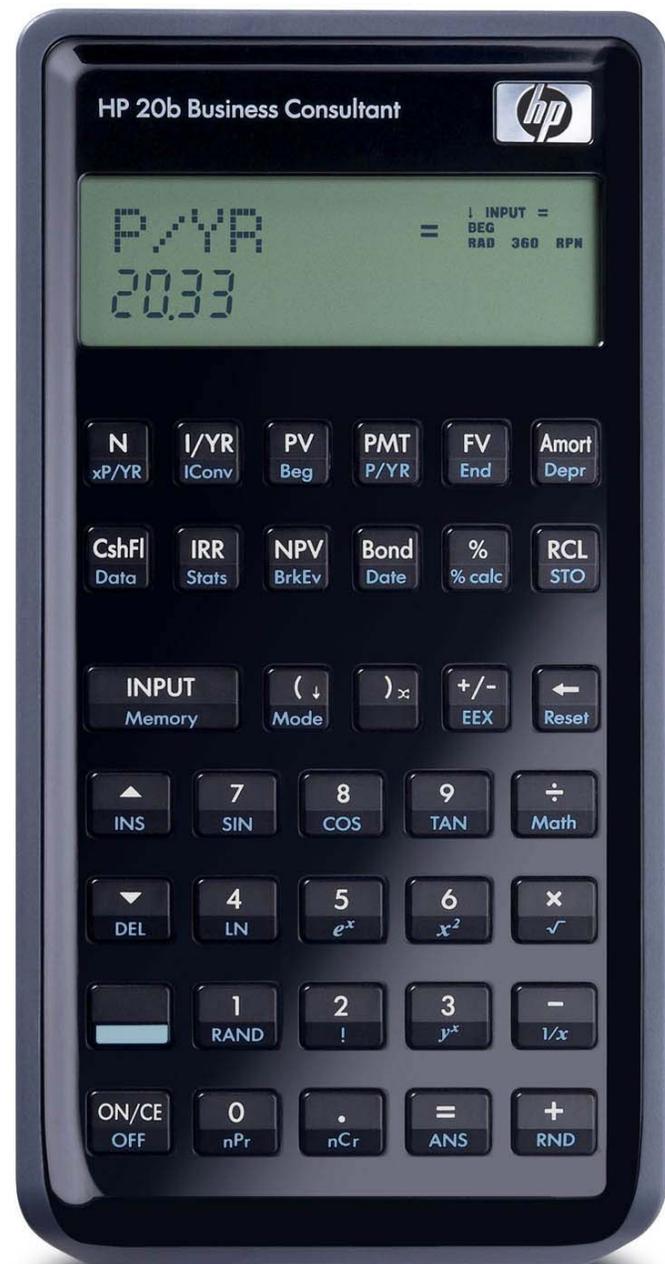
hp calculators

HP 20b Cost, Price, Margin
and Markup Calculations

Cost, Price, Margin and Markup Calculations

The HP 20b % calculation menu

Practice solving Cost, Price, Margin and
Markup Problems



Cost, Price, Margin and Markup Calculations

The HP 20b easily handles problems involving the relationships between cost, price, and margin / markup.

Margin calculations are expressed as a percent of price. If any two of cost, price or margin are entered, the unknown value can be computed. Markup calculations are expressed as a percent of cost. If any two of cost, price or markup are entered, the unknown value can be computed. The formulae used are shown in figures 1 and 2 below. Note that Markup as a % of Price is often referred to as Margin. This term is used in some of the examples.

$$\text{Markup}\% \text{Cost} = \frac{\text{Price} - \text{Cost}}{\text{Cost}} \quad \text{Figure 1}$$

$$\text{Markup}\% \text{Price} = \frac{\text{Price} - \text{Cost}}{\text{Price}} \quad \text{Figure 2}$$

The HP 20b % calculation menu

The HP 20b solves these many percentage problems using the %calc menu. This menu is entered by pressing  and contains areas where you can enter or compute values related to percentage problems. The map of this menu is presented below. There are four separate types of calculations found in this menu. Markup as a percent of cost and markup as a percent of price, part as a percent of a total, and percentage change calculations (these last two are covered in a separate learning module). To choose one of these types of calculations, press  when that calculation type is displayed, as shown below. Once a calculation type has been chosen, to move from one item in the menu to the next, press the down arrow key . This key is abbreviated DWN in the map below.

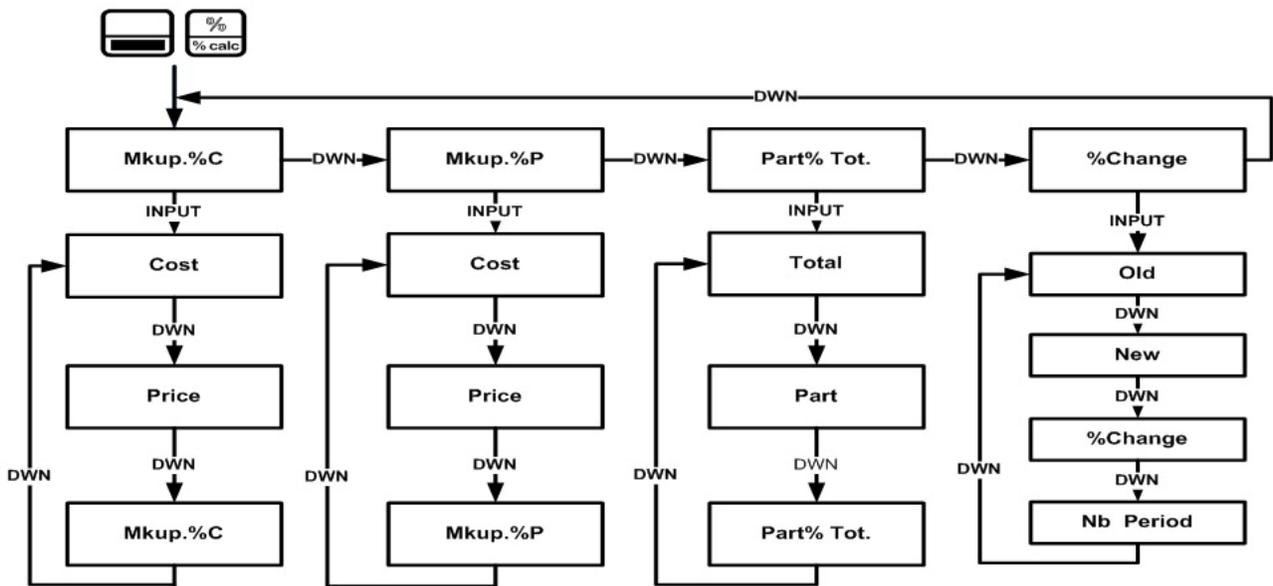


Figure 3 The Menu Map for the Percent Calculation (%calc) Menu

Each of these menu items is considered a read/write menu item, because when it is selected, both the *INPUT* and small (=) annunciators are lit in the top right corner of the HP 20b display. When lit, these annunciators indicate that entering a number and pressing  will store the entered number in the displayed menu item. Pressing  (outside of a

mathematical operation) will then calculate the value for that item based on available data. Any of the menu items can be solved if the other items within the calculation area are known. To clear the %calc menu while in the menu, press . If you are in one part of the %calc menu and wish to do another type of percentage calculation, you can press to re-enter the menu and begin again.

Practice solving problems involving cost, price, margin and markup

Example 1: If the cost of an item is \$50 and it is sold for \$62.50, what is the margin?

Solution: Since this example asks for the margin, we will use the Markup%Price portion of the %calc menu.



Figure 4

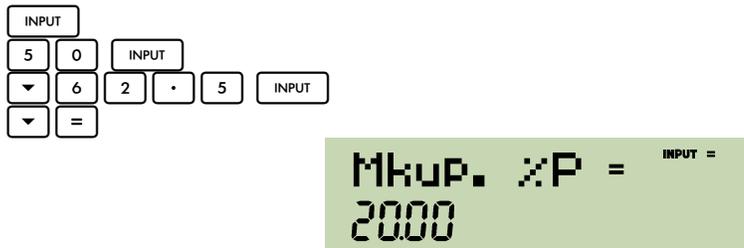


Figure 5

Answer: The margin is 20%.

Example 2: If the cost of an item is \$50 and it is sold for \$62.50, what is the markup?

Solution: Since this example asks for the markup, we will use the Markup%Cost portion of the %calc menu.



Figure 6

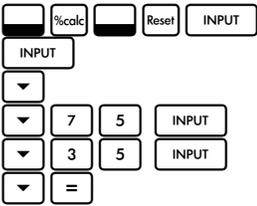


Figure 7

Answer: The markup is 25%.

Example 3: If the selling price of an item is \$75 and the markup is 35%, what is the cost?

Solution:



The diagram shows the following sequence of button presses: %calc, INPUT, 7, 5, INPUT, 3, 5, INPUT, =.

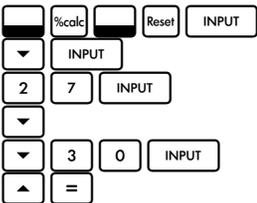


Figure 8

Answer: The cost is \$55.56.

Example 4: If the cost of an item is \$27 and the markup as a percent of price is 30%, what is the selling price?

Solution:



The diagram shows the following sequence of button presses: %calc, INPUT, 2, 7, INPUT, 3, 0, INPUT, =.



Figure 9

Answer: The selling price is \$38.57.

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Example 5: If the markup is 45% and the cost is \$30, what is the selling price?

Solution: HPEURO

Answer: The selling price is \$43.50.

Example 6: If the selling price of an item is \$299 and the margin is 25%, what is the cost?

Solution: HPEURO

Answer: The cost is \$224.25.