# hp calculators

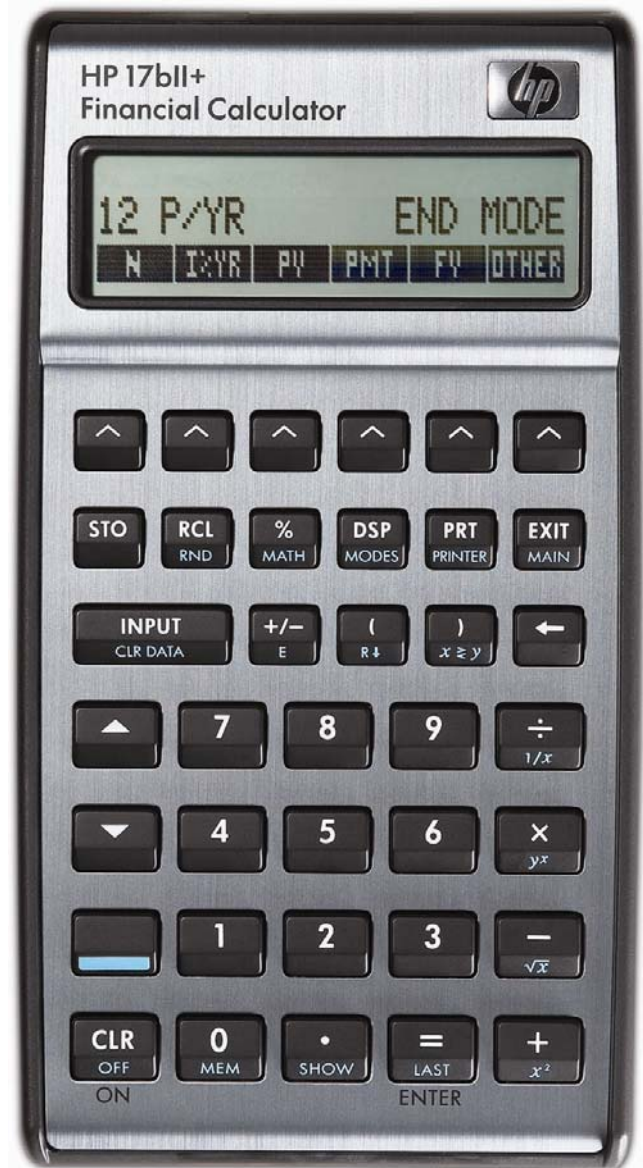**HP 17bII+**  Using Memories

Memories

Numbered Registers

Storage Arithmetic

Practice using memories to solve problems

**HP 17bII+**  Using Memories

## Memories

The HP 17bII+ calculator has several storage areas called memories or registers that can be used to simplify solving problems. These memories hold a number for later use.

### Numbered Registers

The HP 17bII+ has 10 memories that are referenced by a number from 0 to 9. These memories are accessed using two keys: [STO] and [RCL].

To store a number in the display into one of these memories, press [STO] followed by a number from [0 MEM] to [9]. Storing a number into a memory will overwrite the previous contents of the memory.

To recall a number from one of these memories to the display where it can be used, press [RCL] followed by a number from [0 MEM] to [9].

### Storage Arithmetic

The HP 17bII+ has the ability to perform arithmetic calculations on the values stored in the numbered memories. This is done by pressing [STO], then one of the arithmetic keys, [+] [−] [×] [÷], and then a number between [0 MEM] to [9]. For example, to multiply the contents of memory 8 by the number presently in the display, press [STO] [× yx] [8]. The examples will show ways this can be used.

### Practice using memories to solve problems

Example 1:   Solve $5 + \left( \dfrac{4}{9} \right) + \left( \dfrac{2}{\left( 5 + \left( \dfrac{4}{9} \right) \right)} \right)$

Solution:   Since this expression has two terms that are exactly the same, we can compute the value of the expression the first time, save it in a memory and then recall the value for use later in the calculation. Note that the value of the expression is not computed and shown in the display until after the [+] key is pressed in the steps shown below. Use memory 1 to hold the intermediate result. The solution is shown in algebraic mode.

[5] [+] [(] [4] [÷] [9] [)] [+] [STO] [1] [2] [÷] [RCL] [1] [=]

Answer:   5.81. Note that the closing parentheses just before the [=] are not necessary. Pressing [=] will close all open parentheses automatically.
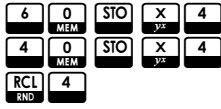
Example 2:   Find the product of 90, 85, 70, 60 and 40 using the memory 4.

Solution:   [9] [0 MEM] [STO] [4]
[8] [5] [STO] [× yx] [4]
[7] [0 MEM] [STO] [× yx] [4]

| 6 MEM | 0 MEM | STO | x yx | 4 |

| 4 MEM | 0 MEM | STO | x yx | 4 |

| RCL RND | 4 |

Answer:     1,285,200,000.

Example 3:  Clear memory 4 assuming it contains the result from the last example.

Solution:   To clear a memory register, store a value of zero in it.

| 0 MEM | STO | 4 |

Answer:     Memory 4 is cleared.