

TEXAS INSTRUMENTS CALCULATOR

SOLAR

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Datamath Calculator Museum

TI-1706 II



**QUICK
REFERENCE
GUIDE**

Introduction

The TI-1706 II is totally solar-powered. You never need to replace any batteries. The solar power cells below the display operate the calculator under any normal reading-light levels, indoors or outdoors.

Caution: Do not carry the calculator in your pants pocket. The display and solar cells are made of glass and may break if you sit on them. Also, do not leave the calculator in direct sunlight for long periods or store it where excessive temperatures are possible.

Turning the Calculator On and Off

To turn the calculator on, expose the solar power cells to a light source and press [ON/C] or [AC].

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Note: Be sure all of the solar cell panel is exposed to light. Covering even a portion of the panel may cause the display to go blank.

The calculator turns off automatically when the solar cell panel is no longer exposed to the light source. (You can easily turn the calculator off by closing the carrying case.)

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Introduction (Cont.)

Entering Numbers

You can enter numbers containing up to 8 digits (with a maximum of 7 digits to the right of the decimal).

Negative numbers are indicated by a minus sign on the right side of the display.

Clearing the Calculator

To clear the calculator and the memory, press **[AC]**. Note that you should press **[AC]** each time you turn on the calculator.

To clear the calculator without affecting the memory, press **[ON/C]** twice.

Clearing Entry Errors

If you enter an incorrect number, press **[ON/C]** once to clear the display. You can then enter the correct number.

Note: To clear an incorrect number, you must press **[ON/C]** before you press a function key. Pressing **[ON/C]** following a function key clears the calculator.

If you press the wrong arithmetic function key, simply press the correct key and continue with your calculation.

Arithmetic Calculations

The algebraic entry system of the calculator completes all arithmetic operations in the order they are entered.

To display the result of a calculation, press [=]. The calculator is then ready for you to enter a new calculation.

In the following examples, the \rightarrow symbol indicates the result that is displayed after you press the key sequence that precedes the symbol.

Addition and Subtraction

Example: $7.921 + 1.6 - 12.321 = ?$

7.921[+]1.6[-]12.321[=] \rightarrow 2.8 -

Multiplication and Division

Example: $\frac{12 \times 13}{6} = ?$

12[×]13[÷]6[=] \rightarrow 26.

Calculations with a Constant

The automatic constant register is set when you enter the first calculation in a series. When you enter another number and press [=], the calculator completes the problem using the number and function in the constant register.

For addition, subtraction, and division, the constant register uses the **second** number entered (the number you enter following the function key).

For multiplication, the constant register uses the **first** number entered (the number in the display when you press the [x] key).

Example: $2 + 3 = ?$; $4 + 3 = ?$

2[+]3[=]→5.
4[=]→7.

Example: $8 - 6 = ?$; $3 - 6 = ?$

8[-]6[=]→2.
3[=]→3.-

Example: $27 \div 3 = ?$; $15 \div 3 = ?$

27[+]3[=]→9.
15[=]→5.

Example: $3 \times 8 = ?$; $3 \times 15 = ?$

3[x]8[=]→24.
15[=]→45.

Special Functions

Your calculator also enables you to perform several special functions.

Squaring a Number

To find the square of a number (the number multiplied by itself), press $[x][=]$.

Example: $2.5^2 = ?$

$2.5[x][=] \rightarrow 6.25$

Example: $(1.6 \times 2.5)^2 = ?$

$1.6[x]2.5[x][=] \rightarrow 16.$

Square Roots

To find the square root of a number, press $[\sqrt{\quad}]$.

Example: $\sqrt{144} = ?$

$144[\sqrt{\quad}] \rightarrow 12.$

Example: $\sqrt{16^2 + 33} = ?$

$16[x][=][+]33[=][\sqrt{\quad}] \rightarrow 17.$

Reciprocals

To find the reciprocal of a number (the number divided into 1), press $[+][=]$.

Example: $\frac{1}{25} = ?$

$25[+][=] \rightarrow 0.04$

Percentage Calculations

Percentages are calculated immediately when you press [%]. You do not need to press [=]. If you do press [=], the calculator may display incorrect results.

Notice that two key sequences are shown in the add-on and discount examples. The first key sequence calculates the result directly, and the second displays the intermediate percentage.

Percentages: 5% of \$250 = ?

$$250 [\times] 5 [\%] \rightarrow 12.5$$

Add-ons: \$250 plus 5% tax = ?

$$250 [+] 5 [\%] \rightarrow 262.5$$

or

$$250 [\times] 5 [\%] \rightarrow 12.5 [+] [=] \rightarrow 262.5$$

Discounts: \$250 less 5% discount = ?

$$250 [-] 5 [\%] \rightarrow 237.5$$

or

$$250 [\times] 5 [\%] \rightarrow 12.5 [-] [=] \rightarrow 237.5$$

Ratios: \$600 is what percent of \$1,500?

$$600 [+] 1500 [\%] \rightarrow 40.$$

Combinations:

\$129 less 25% discount plus 4% tax = ?

$$129 [-] 25 [\%] [+] 4 [\%] \rightarrow 100.62$$

Memory Operations

The **[M +]** key completes any operation (acts like the **[=]** key) and adds the result to memory. The **[M -]** key completes any operation and subtracts the result from memory.

To display (recall) the number in memory, press **[MRC]** once. To clear the memory, press **[MRC]** twice.

Because **[M +]** and **[M -]** add to or subtract from the current contents of the memory, press **[MRC]** twice or **[AC]** once before you begin a problem that uses the memory.

The letter "M" appears in the upper right corner of the display when the memory contains a number other than zero.

Example: $(4 \times 11.99) + (12 \times 0.98) = ?$

[AC] 4 [x] 11.99 [M +] 12 [x] .98 [M +] [MRC]
→ 59.72

Example: $\frac{1.98}{4} - \frac{4.98}{8} = ?$

[AC] 1.98 [+] 4 [M +] 4.98 [+] 8 [M -] [MRC]
→ 0.1275 -

Example: $\frac{7.9 + 8.1}{-(5.2 + 2.8)} = ?$

[AC] 5.2 [+] 2.8 [M -] 7.9 [+] 8.1 [+] [MRC] [=]
→ 2. -

Error/Overflow Conditions

An error/overflow condition is indicated by the letter "E" in the lower right corner of the display. Press [ON/C] once to clear the condition and twice to clear the calculator, or press [AC] to clear the calculator and memory.

An error/overflow condition occurs when:

1. The result of a calculation has more than 8 digits to the left of the decimal point. The 8 most significant digits of the result are displayed, with the decimal point appearing 8 places to the left of its correct position. To determine the correct position of the decimal point, mentally move it 8 places to the right, inserting zeros as required.
2. The result in memory has more than 8 digits to the left of the decimal point. When you press [ON/C], the memory retains the number stored prior to the overflow.
3. You attempt to divide a number by zero.
4. You attempt to find the square root of a negative number.

In Case of Difficulty

If you have difficulty operating the calculator, use the following procedures.

1. Be sure all of the solar cell panel below the display is exposed to light.
2. Press [ON/C] [ON/C] or [AC] to clear the calculator. Then repeat your calculation.
3. Review the instructions in this manual to be sure that your calculations are entered correctly.

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Service Information

If the suggestions in "In Case of Difficulty" do not correct the problem, call Consumer Relations **toll-free** within the United States at: **1-800-TI CARES (842-2737)**.

From outside the United States, call 1-806-741-4800. (We cannot accept collect calls at this number.) Or you may write to:

Texas Instruments Incorporated
Consumer Relations
P.O. Box 53
Lubbock, Texas 79408

Please contact Consumer Relations before returning the calculator for service and for general information about using the calculator. [Datamath Calculator Museum](#)

Technical Questions

If you have technical questions about calculator operation or applications, call 1-806-741-2663. We regret that we cannot accept collect calls at this number. As an alternative, you can write to Consumer Relations at the address given above.

Express Service

Texas Instruments offers an express service option for fast delivery. Please call Consumer Relations at 1-800-TI CARES (842-2737) for additional information.

Calculator Accessories

If you are unable to find accessories at your local dealer, you may order them from Texas Instruments. Please call Consumer Relations at 1-800-TI CARES (842-2737) for information.

Returning Your Calculator for Service

A defective calculator will be either repaired or replaced with the same or comparable reconditioned model (at TI's option) when it is returned, postage prepaid, to a Texas Instruments Service Facility.

Texas Instruments cannot assume responsibility for loss or damage during incoming shipment. For your protection, carefully package the calculator for shipment and insure it with the carrier. Enclose your full return address, any accessories related to the problem, and a note describing the problem you experienced with the calculator. Also, please enclose a copy of your sales receipt or other proof of purchase to determine warranty status.

Please ship the calculator postage prepaid; COD shipments cannot be accepted.

Service Information (Continued)

In-Warranty Service

For a calculator covered under the warranty period, no charge is made for service.

Out-of-Warranty Service

For an out-of-warranty calculator, a flat-rate fee by model is charged for service. Estimates are not provided prior to repair; to obtain the service charge for your product, please call Consumer Relations before returning the calculator to the Service Facility.

TI Service Facilities

U.S. Residents (U.S. Postal Service)

Texas Instruments

P.O. Box 2500
Lubbock, Texas 79408

U.S. Residents (other carriers)

Texas Instruments

2305 N. University
Lubbock, Texas 79415

Canadian Residents Only

Texas Instruments

41 Shelley Road
Richmond Hill, Ontario L4C 5G4

One-Year Limited Warranty

This Texas Instruments electronic calculator warranty extends to the original consumer purchaser of the product.

Warranty Duration: This calculator is warranted to the original consumer purchaser for a period of one (1) year from the original purchase date.

Warranty Coverage: This calculator is warranted against defective materials or workmanship. **This warranty is void if the product has been damaged by accident, unreasonable use, neglect, improper service or other causes not arising out of defects in material or workmanship.**

Warranty Disclaimers: Any implied warranties arising out of this sale, including but not limited to the implied warranties of merchantability and fitness for a particular purpose, are limited in duration to the above one year period. Texas Instruments shall not be liable for loss of use of the calculator or other incidental or consequential costs, expenses, or damages incurred by the consumer or any other user.

Some states do not allow the exclusion or limitations of implied warranties or consequential damages, so the above limitations or exclusions may not apply to you.

Legal Remedies: This warranty gives you specific legal rights, and you may also have other rights that vary from state to state.

Warranty Performance: During the above one (1) year warranty period, your TI calculator will either be repaired or replaced with a reconditioned comparable model (at TI's option) when the product is returned, postage prepaid, to one of the Texas Instruments Service Facilities listed on page 11. The repaired or replacement calculator will continue the warranty of the original unit or six months, whichever is longer. Other than the postage requirement, no charge will be made for such repair or replacement of in-warranty calculators. Out-of-warranty calculators will be charged at the rates in effect at the time the unit is received. Texas Instruments strongly recommends that you insure the product for value, prior to mailing.

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Printed in Taiwan

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