



TI-36X Solar

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TI-36X SOLAR
Scientific Calculator

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Basic Operations

- To turn on the TI-36X Solar, expose the solar panel to light and press $\overline{\text{AC/ON}}$. **Note:** Always press $\overline{\text{AC/ON}}$ to clear the calculator because memory and display may contain incorrect numbers.
- To turn off the TI-36X Solar, cover the solar panel with the slide case.

$\overline{\text{2nd}}$ selects the 2nd function of the next key pressed.

$\overline{\text{3rd}}$ selects the 3rd function of the next key pressed.

Third function
Second function
Primary function



For example, $8 \overline{\text{3rd}} \overline{\text{3rd}}$ finds the cube root of 8.

To cancel 2nd or 3rd, press $\overline{\text{2nd}}$ or $\overline{\text{3rd}}$ again.

Results

The TI-36X Solar calculates up to 12 digits and can display up to 10 digits plus a minus sign (-9,999,999,999 through 9,999,999,999) and a 2-digit exponent. Results with more than 10 digits display in scientific notation.

2-ENG

Basic Arithmetic

$\overline{\text{+}}$ $\overline{\text{-}}$ $\overline{\text{x}}$ $\overline{\text{=}}$	$60 \overline{\text{+}} 5 \overline{\text{x}} 12 \overline{\text{=}}$	120.
$\overline{\text{=}}$	Completes all pending operations. With constant, repeats the operation and value.	
$\overline{\text{+/-}}$	Changes sign of value just entered. $1 \overline{\text{+}} 8 \overline{\text{+/-}} \overline{\text{+}} 12 \overline{\text{=}}$ 5.	
$\overline{\text{(}} \overline{\text{)}}$	Parenthetical expression (up to 15 open for each pending operation). $\overline{\text{=}}$ closes all open parentheses.	
$\overline{\text{3rd}} \overline{\text{[}\pi\text{]}}$	Pi is calculated with 12 digits (3.14159265359), displayed with 10 digits (3.141592654). $2 \overline{\text{x}} \overline{\text{3rd}} \overline{\text{[}\pi\text{]}} \overline{\text{=}}$ 6.283185307	

3-ENG

Percents

Percentage (5% of 250)

250 \times 5 $\frac{3rd}{}$ [%]	0.05
$\frac{3rd}{}$	12.5

Ratio (Ratio of 250 to 5)

250 \div 5 $\frac{3rd}{}$ [%]	0.05
$\frac{3rd}{}$	5000.

Add-On (5% add-on of 250)

250 \div 5 $\frac{3rd}{}$ [%]	12.5
$\frac{3rd}{}$	262.5

Discount (5% discount on 250)

250 \square 5 $\frac{3rd}{}$ [%]	12.5
$\frac{3rd}{}$	237.5

4-ENG

Fractions

$b \frac{a}{c} c$ Enters a proper or improper fraction, b/c ($b \leq 6$ digits, $c \leq 3$ digits). When possible, improper fractions are displayed as mixed numbers.

3 $\frac{a}{c}$ 4	3 $\frac{1}{4}$
\times 3 $\frac{3rd}{}$	2 $\frac{1}{4}$

Single-variable functions display decimal results.

1 $\frac{a}{c}$ 2 \times^2	0.25
------------------------------	------

$a \frac{a}{c} b \frac{b}{c} c$ Enters the mixed fraction $a b/c$. ($a, b, c \leq 3$ digits each, with the total digits ≤ 8).

6 $\frac{a}{c}$ 4 $\frac{b}{c}$ 6	6 $\frac{4}{6}$
$\frac{3rd}{}$	6 $\frac{2}{3}$

$\frac{2nd}{}$ [d/c] Toggles display between mixed number and improper fraction.

30 $\frac{a}{c}$ 4	30 $\frac{1}{4}$
$\frac{2nd}{}$ [d/c]	7 $\frac{1}{2}$
$\frac{2nd}{}$ [d/c]	15 $\frac{1}{2}$
$\frac{2nd}{}$ [d/c]	7 $\frac{1}{2}$

$\frac{3rd}{}$ [F \leftrightarrow D] Toggles display between fraction and decimal. **Note:** Due to display size, not all decimal numbers can toggle to fractions.

55 $\frac{a}{c}$ 24	55 $\frac{1}{24}$
$\frac{3rd}{}$ [F \leftrightarrow D]	2.29166667
$\frac{3rd}{}$ [F \leftrightarrow D]	2 $\frac{7}{24}$

5-ENG

Powers and Roots		
$1/x$	8 $1/x$ + 4 $1/x$ =	0.375
x^2	6 x^2 + 2 =	38.
\sqrt{x}	256 \sqrt{x} + 4 \sqrt{x} =	18.
$\sqrt[3]{x}$	8 $\sqrt[3]{x}$ + 4 =	6.
y^3	5 y^3 3 =	125.
$\sqrt[2]{y}$	8 $\sqrt[2]{y}$ 3 =	2.

Logarithmic Functions		
LOG	15.32 LOG + 12.45 LOG =	1.185258765 2.280428117
$\sqrt[2]{10^x}$	2 $\sqrt[2]{10^x}$ 10 x^2 =	0.
LN	15.32 LN + 12.45 LN =	2.729159164 5.250879787
$\sqrt[2]{e^x}$.693 $\sqrt[2]{e^x}$ + 1 =	1.999705661 2.999705661

($e=2.71828182846$)

6-ENG

Angle Units		
$\sqrt[2]{\text{DRG}}$	Cycles angle-unit setting between degrees, radians, and grads without affecting the displayed number.	
$\sqrt[3]{\text{DRG}}$	Cycles (converts) angle-unit setting between degrees, radians, and grads for display, entry, and calculation.	
45	DEG	45
$\sqrt[3]{\text{DRG}}$	RAD	0.785398163
$\sqrt[3]{\text{DRG}}$	GRAD	50.
$\sqrt[3]{\text{DRG}}$	DEG	45.

7-ENG

DMS

Enter DMS (Degrees/Minutes/Seconds) values as **D.MMSSs**, using 0s as necessary:

D	degrees (0–7 digits)
.	decimal-point separator
MM	minutes (must be 2 digits)
SS	seconds (must be 2 digits)
s	fractional part of a second

For example, enter $48^{\circ}5'3.5''$ as **48.05035**.

Before using a DMS value in a calculation, you must convert it to decimal with $\boxed{2\text{nd}}$ $\boxed{\rightarrow\text{DD}}$.

$\boxed{2\text{nd}}$ $\boxed{\rightarrow\text{DD}}$	Interprets display as DMS and converts it to decimal.	
	30.09090 $\boxed{2\text{nd}}$ $\boxed{\rightarrow\text{DD}}$	30.1525
$\boxed{3\text{rd}}$ $\boxed{\rightarrow\text{DMS}}$	Temporarily displays current value as DMS.	
	30.1525 $\boxed{3\text{rd}}$ $\boxed{\rightarrow\text{DMS}}$	30°09'09"0

8-ENG

Rectangular to Polar

$\boxed{3\text{rd}}$ $\boxed{\text{R}\rightarrow\text{P}}$ converts rectangular coordinates (x,y) to polar coordinates (r,θ) .

Convert rectangular coordinates $(10,8)$ to polar.

$\boxed{\text{AC/ON}}$ or $\boxed{2\text{nd}}$ $\boxed{\text{DRG}}$ (if necessary)	DEG	
10 $\boxed{\text{x}\leftrightarrow\text{y}}$ 8	DEG	8
$\boxed{3\text{rd}}$ $\boxed{\text{R}\rightarrow\text{P}}$ (display r)	DEG r	12.80624847
$\boxed{\text{x}\leftrightarrow\text{y}}$ (display θ)	DEG	38.65980825
$\boxed{\text{x}\leftrightarrow\text{y}}$ (display r)	DEG r	12.80624847

Polar to Rectangular

$\boxed{2\text{nd}}$ $\boxed{\text{P}\rightarrow\text{R}}$ converts polar coordinates (r,θ) to rectangular coordinates (x,y) .

Convert polar coordinates $(5,30)$ to rectangular.

$\boxed{\text{AC/ON}}$ or $\boxed{2\text{nd}}$ $\boxed{\text{DRG}}$ (if necessary)	DEG	
5 $\boxed{\text{x}\leftrightarrow\text{y}}$ 30	DEG	30
$\boxed{2\text{nd}}$ $\boxed{\text{P}\rightarrow\text{R}}$ (display x)	DEG x	4.330127019
$\boxed{\text{x}\leftrightarrow\text{y}}$ (display y)	DEG	2.5
$\boxed{\text{x}\leftrightarrow\text{y}}$ (display x)	DEG x	4.330127019

9-ENG

Trigonometric Functions

Before using the trigonometric functions (SIN , COS , TAN , 2^{nd} SIN^{-1} , 2^{nd} COS^{-1} , 2^{nd} TAN^{-1}), select **DEG**, **RAD**, or **GRAD** with 2^{nd} DRG .

2^{nd} DRG (if necessary)	DEG	
90 SIN	DEG	1.
\square 30 COS	DEG	0.866025404
\square	DEG	0.133974596
1 2^{nd} SIN^{-1}	DEG	90.
\square .5 \square	DEG	89.5

Note: Before using a DMS (Degree/Minute/Second) value in a calculation, you must convert it to decimal with 2^{nd} $\text{D}\rightarrow\text{DD}$.

Hyperbolic Functions

To access hyperbolic functions, press HYP and then the function (HYP SIN , HYP COS , HYP TAN , HYP 2^{nd} SIN^{-1} , HYP 2^{nd} COS^{-1} , HYP 2^{nd} TAN^{-1}).

Note: **DEG**, **RAD**, or **GRAD** does not affect hyperbolic calculations.

5 HYP SIN	74.20321058
\square 2 \square	76.20321058
5 HYP 2^{nd} SIN^{-1}	2.312438341
\square 2 \square	4.312438341

10-ENG

One-Variable Statistics

3^{rd} STAT t	One-variable statistics mode.
2^{nd} CSR	Clears all statistical data.
AC/ON	Clears all statistical data, STAT mode, and memory.
\square Σ \square	Enters data point.
2^{nd} S \square	Removes data point.
2^{nd} FRQ	Adds or removes multiple occurrences of a data point. Enter data point, press 2^{nd} FRQ , enter frequency (1-99), press \square Σ \square to add or 2^{nd} S \square to remove data points.
2^{nd} S \square	Sum.
2^{nd} S \square 2	Sum of squares.
2^{nd} S \square \bar{x}	Mean.
2^{nd} S \square σ_{xn}	Population standard deviation (n weighting).
2^{nd} S \square $\sigma_{\text{xn}-1}$	Sample standard deviation ($n-1$ weighting).
2^{nd} S \square n	Number of data points.

In **STAT** mode press \square to perform basic arithmetic, permutations, combinations, and polar/rectangular conversions.

Find the sum, mean, population standard deviation, and sample standard deviation for the data set: 45, 55, 55, 55, 60, 80. The last data point is erroneously entered as 8, removed with $\text{2nd} [\Sigma^-]$, and then correctly entered as 80.

$\text{3rd} [\text{STAT } 1]$	STAT	0.
$\text{2nd} [\text{CSR}]$	STAT	0.
45 $\text{[}\Sigma^+$	STAT	1.
55 $\text{2nd} [\text{FRQ}]$ 3 $\text{[}\Sigma^+$	STAT	4.
60 $\text{[}\Sigma^+$	STAT	5.
8 $\text{[}\Sigma^+$	STAT	6.
8 $\text{2nd} [\Sigma^-]$	STAT	5.
80 $\text{[}\Sigma^+$	STAT	6.
$\text{2nd} [\Sigma x]$ (sum)	STAT	350.
$\text{2nd} [\bar{x}]$ (mean)	STAT	58.33333333
$\text{2nd} [\Sigma x^2]$ (sum of squares)	STAT	21100.
$\text{2nd} [\sigma_{xn}]$ (n weighting)	STAT	10.67187373
$\text{2nd} [\sigma_{xn-1}]$ ($n-1$ weighting)	STAT	11.69045194

12-ENG

Two-Variable Statistics

$\text{3rd} [\text{STAT } 2]$	Two-variable statistics mode.
$\text{2nd} [\text{CSR}]$	Clears all statistical data.
AC/ON	Clears all statistical data, STAT mode, and memory.
$x [\text{X}\leftrightarrow\text{Y}] y [\Sigma^+]$	Enters data point.
$x [\text{X}\leftrightarrow\text{Y}] y$ $\text{2nd} [\Sigma^-]$	Removes data point.
$\text{2nd} [\text{FRQ}]$	Adds or removes multiple occurrences of a data point. Enter data point, press $\text{2nd} [\text{FRQ}]$, enter frequency (1-99), press $\text{[}\Sigma^+$ to add or $\text{2nd} [\Sigma^-]$ to remove data points.
$\text{2nd} [\Sigma x]$ or $\text{2nd} [\Sigma y]$	Sum.
$\text{2nd} [\Sigma x^2]$ or $\text{2nd} [\Sigma y^2]$	Sum of squares.
$\text{2nd} [\bar{x}]$ or $\text{2nd} [\bar{y}]$	Mean.
$\text{2nd} [\sigma_{xn}]$ or $\text{2nd} [\sigma_{yn}]$	Population standard deviation (n weighting).
$\text{2nd} [\sigma_{xn-1}]$ or $\text{2nd} [\sigma_{yn-1}]$	Sample standard deviation ($n-1$ weighting).
$\text{2nd} [n]$	Number of data points.
$\text{2nd} [\Sigma xy]$	Sum of the xy products.
$\text{3rd} [\text{COR}]$	Correlation coefficient.
$\text{2nd} [\text{ITC}]$	Intercept.
$\text{2nd} [\text{SLP}]$	Slope.
$\text{2nd} [x']$	Predicted x value.
$\text{2nd} [y']$	Predicted y value.

13-ENG

For trend-line analysis, enter 1st data point, and then enter just y values with $\Sigma+$. x is automatically incremented by 1.

Linear Regression Example

Predict y for $x = 9$, given $(4,5)$, $(4,5)$, $(9,9)$, $(2,3)$.
Calculate correlation coefficient, slope, and intercept of the line, mean of x values, and mean of y values.

$\overline{3rd}$ [STAT 2]	STAT	0.
$\overline{2nd}$ [CSR]	STAT	0.
4 $\overline{x\leftrightarrow y}$ 5 $\overline{2nd}$ [FRQ] 2 $\overline{\Sigma+}$	STAT	2.
9 $\overline{x\leftrightarrow y}$ 9 $\overline{\Sigma+}$	STAT	3.
2 $\overline{x\leftrightarrow y}$ 3 $\overline{\Sigma+}$	STAT	4.
9 $\overline{2nd}$ [y'] (predict y for $x=9$)	STAT	9.074766355
$\overline{3rd}$ [COR] (correlation coefficient)	STAT	0.998030525
$\overline{2nd}$ [SLP] (slope)	STAT	0.841121495
$\overline{2nd}$ [ITC] (intercept)	STAT	1.504672897
$\overline{2nd}$ [\bar{x}] (mean of x values)	STAT	4.75
$\overline{2nd}$ [\bar{y}] (mean of x values)	STAT	5.5

14-ENG

Probability

A **combination** is an arrangement of objects in which order is not important, as in a hand of cards. $\overline{3rd}$ [nCr] calculates the number of possible combinations of n items taken r at a time.

Calculate the number of 5-card poker hands that can be dealt from a deck of 52 cards.

52 $\overline{x\leftrightarrow y}$ 5 $\overline{3rd}$ [nCr] $\overline{=}$ 2598960.

A **permutation** is an arrangement of objects in which the order is important, as in a race. $\overline{2nd}$ [nPr] calculates the number of possible permutations of n items taken r at a time.

Calculate the number of possible permutations for the 1st-, 2nd-, and 3rd-place finishers (no ties) in an 8-horse race.

8 $\overline{x\leftrightarrow y}$ 3 $\overline{2nd}$ [nPr] $\overline{=}$ 336.

A **factorial** is the product of the positive integers from 1 to n . (n must be a positive whole number ≤ 69 .)

Using the digits 1, 3, 7, and 9 only one time each, how many 4-digit numbers can you form?

4 $\overline{3rd}$ [x!] 24.

15-ENG

Clearing and Correcting

AC/ON	Clears display, errors, all pending operations, statistical data, STAT mode and memory. Sets DEG angle units, floating-decimal format.
CE/C	Clears value (before pressing operation key), display, errors, all pending operations. Does not affect mode, display format, angle units, memory, or statistical data. CE/C after () , () , (²) , (²) (²) , (²) (²) , (²) , (²) , or (²) clears the calculator as if you had pressed CE/C CE/C .
CE/C CE/C	Clears display and all pending operations.
→	Deletes right-most character in display.
0 (STO) <i>n</i>	Clears memory <i>n</i> .
(3rd) (FLO)	Clears SCI or ENG notation.
(2nd) (FIX) (.)	Clears FIX notation.
(2nd) (CSR)	Clears all statistical data.

You can change from y^x , $\sqrt[n]{y}$, $x \div$, $+$, $-$, AND, OR, XOR, or XNOR to another operation simply by pressing the intended key if the intended operation has a lower priority.

16-ENG

Physical Constants

c	speed of light	299,792,458 meters per second
g	gravitational acceleration	9.80665 meters per second ²
m_e	electron mass	$9.1093897 \times 10^{-31}$ kilograms
e	electron charge	$1.60217733 \times 10^{-19}$ coulombs
h	Planck's constant	$6.6260755 \times 10^{-34}$ Joule seconds
N_A	Avogadro's number	6.0221367×10^{23} molecules per mole
R	ideal gas constant	8.31451 Joules per mole °Kelvin
G	universal gravitation	6.67259×10^{-11} Newton meters ² per kilogram ²

Press **(3rd)** **(CONST)** and then the appropriate constant key.

Calculate 3 times the speed of light:

3 **(x)** **(3rd)** **(CONST)** **(c)** **(=)** **899377374.**

17-ENG

English/Metric Conversions

English/metric conversions are available only in DEC.

centimeters to inches	$\boxed{2nd} \boxed{\rightarrow in}$	cm \div 2.54
inches to centimeters	$\boxed{3rd} \boxed{\rightarrow cm}$	in \times 2.54
liters to U.S. liquid gallons	$\boxed{2nd} \boxed{\rightarrow gal}$	l \div 3.785411784
U.S. liquid gallons to liters	$\boxed{3rd} \boxed{\rightarrow l}$	gal \times 3.785411784
kilograms to pounds mass	$\boxed{2nd} \boxed{\rightarrow lb}$	kg \div .45359237
pounds to kilograms	$\boxed{3rd} \boxed{\rightarrow kg}$	lb \times .45359237
Celsius to Fahrenheit	$\boxed{2nd} \boxed{\rightarrow ^\circ F}$	$^\circ C \times 9/5 + 32$
Fahrenheit to Celsius	$\boxed{3rd} \boxed{\rightarrow ^\circ C}$	$(^\circ F - 32) \times 5/9$
grams to ounces avoirdupois	$\boxed{2nd} \boxed{\rightarrow oz}$	g \div 28.349523125
ounces avoirdupois to grams	$\boxed{3rd} \boxed{\rightarrow g}$	oz \times 28.349523125

Convert 300 grams to ounces.

300 $\boxed{2nd} \boxed{\rightarrow oz}$	10.58218858
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18-ENG

Constants (Repeated Operations)

A constant contains an operation (+, -, \times , \div , y^x , $\sqrt[y]{x}$, AND, OR, XOR, or XNOR) and a value. $\boxed{=}$ repeats the calculation. $\boxed{AC/ON}$, $\boxed{CE/C}$ $\boxed{CE/C}$, or a pending operation key clears the constant.

Calculate $2 \times \pi$, $4 \times \pi$, and $8 \times \pi$.

2 $\boxed{\times}$ $\boxed{3rd} \boxed{[\pi]}$ $\boxed{=}$	6.283185307
4 $\boxed{=}$	12.56637061
8 $\boxed{=}$	25.13274123

19-ENG

Memory

The TI-36X Solar has 3 memories. When a memory contains a number other than 0, **M** displays. To clear a single memory, press 0 **[STO]** 1, 0 **[STO]** 2, or 0 **[STO]** 3. **[AC/ON]** clears all three memories.

[STO] <i>n</i>	Stores displayed value in memory <i>n</i> , replacing current value.		
	23 [STO] 1	M	23.
	[+] 2 [=]	M	25.
[RCL] <i>n</i>	Recalls value in memory <i>n</i> .		
	(continued)		
	[RCL] 1	M	23.
	[+] 3 [=]	M	26.
[2nd] [SUM] <i>n</i>	Adds displayed value to memory <i>n</i> .		
	(continued)		
	4 [2nd] [SUM] 1	M	4.
	[RCL] 1	M	27.
[3rd] [EXC] <i>n</i>	Exchanges displayed and memory values.		
	(continued)		
	3 [x] 5 [=]	M	15.
	[3rd] [EXC] 1	M	27.
	[3rd] [EXC] 1	M	15.

20-ENG

Order of Operations

1st	Expressions inside parentheses.
2nd	Trigonometric, hyperbolic, square, square root, cube root, factorial, reciprocal, angle conversion, combinations, permutations, percent, logarithms, change sign, metric conversions, logical NOT.
3rd	Universal powers and roots.
4th	Multiplication and division.
5th	Addition and subtraction.
6th	Logical AND.
7th	Logical OR, XOR, XNOR.
8th	[=] completes all operations.

The TI-36X Solar uses the Algebraic Operating System (AOS™). It stores up to 4 pending operations (1 if **STAT** is displayed).

21-ENG

Number-System Modes

[3rd] [DEC]	Selects decimal mode.
[3rd] [BIN]	Selects binary (BIN) mode and converts the integer portion of the displayed number. You can enter positive binary numbers as large as 111111111 (9 digits). Numbers beyond this are interpreted as negative (2's complement) numbers.
[3rd] [OCT]	Selects octal (OCT) mode and converts the integer portion of the displayed number. You can enter positive octal numbers as large as 377777777. Numbers beyond this are interpreted as negative (2's complement) numbers.
[3rd] [HEX]	Selects hexadecimal (DEC) mode and converts the integer portion of the displayed number. You can enter positive hexadecimal numbers as large as 2540BE3FF. Numbers from FDABF41C01 through FFFFFFFF are interpreted as negative (2's complement) numbers. Note: Hexadecimal numbers between 2540BE3FF and FDABF41C01 are equivalent to decimal values that are outside the range of the calculator and therefore cause an error.

Calculate $16+1$ and display in each number mode.

16 [+] 1 [=]		17.
[3rd] [BIN]	BIN	10001
[3rd] [OCT]	OCT	21
[3rd] [HEX]	HEX	11
[3rd] [DEC]		17.

22-ENG

To enter the hexadecimal digits A through F, use the keys shown below.

D C	E g	F me
SIN ⁻¹ SIN	COS ⁻¹ COS	TAN ⁻¹ TAN
A h	B NA	C R
FRQ 1/x	\bar{x} x ²	αx^{n-1} \sqrt{x}

B and D are shown as uppercase letters on the keyboard, but displayed as lowercase **b** and **d**. If you enter ABCD, for example, the display shows **AbCd**.

To display the 2's complement of the number in the display, press **[+/-]**.

23-ENG

Boolean Logic Operations

You can perform logical AND, OR, XOR, XNOR, and NOT operations in the decimal, binary, octal, and hexadecimal modes.

Except for NOT, these functions compare the corresponding bits of two values. The result is displayed in the current number base.

Note: Although the TI-36X Solar does not display leading zeros for integers, logical operations treat each value as a 10-digit binary number. (A displayed value of 0, for example, is treated as 0000000000_{BIN}, and a displayed value of 1 is treated as 0000000001_{BIN}.) Keep this in mind if you see unexpected results.

AND	0 AND 0 = 0	0 AND 1 = 0	1 AND 1 = 1
OR	0 OR 0 = 0	0 OR 1 = 1	1 OR 1 = 1
XOR	0 XOR 0 = 0	0 XOR 1 = 1	1 XOR 1 = 0
XNOR	0 XNOR 0 = 1	0 XNOR 1 = 0	1 XNOR 1 = 1
NOT	NOT 0 = 1	NOT 1 = 0	

What is the binary result of 9F_{HEX} XOR 01_{HEX}?

[3rd] [HEX]	HEX	0
9F [3rd] [XOR] 1 [3rd]	HEX	9E
[3rd] [BIN]	BIN	10011110

24-ENG

Notation

[3rd] [SCI]	Selects scientific notation. 12345 [3rd] [SCI]	12345. 1.2345 ⁰⁴
[3rd] [ENG]	Selects engineering notation (exponent is a multiple of 3). (continued) [3rd] [ENG]	12.345 ⁰³
[3rd] [FLO]	Restores standard notation (floating-decimal) format.	
[2nd] [FIX] <i>n</i>	Sets decimal places to <i>n</i> (0-9), retaining notation format. (continued) [2nd] [FIX] 2 [3rd] [2nd] [FIX] 4 [3rd]	12.35 ⁰³ 12.3450 ⁰³
[2nd] [FIX] [-]	Removes fixed-decimal setting.	
[EE]	Enters exponent.	

You can enter a value in floating-decimal, fixed-decimal, or scientific notation, regardless of display format. Display format affects only results.

To enter a number in scientific notation:

1. Enter up to 10 digits for base (mantissa). If negative, press [+/-] after entering the mantissa.
2. Press [EE].
3. Enter 1 or 2 digit exponent. If negative, press [+/-] either before or after entering exponent.

1.2345 [+/-] [EE] [+/-] 65 -1.2345⁻⁶⁵

25-ENG

Display Indicators

2nd	Calculator will access 2nd function (printed on top half of key) of next key pressed.
3rd	Calculator will access 3rd function (printed above key) of next key pressed.
M	Value other than 0 in memory.
HYP	Calculator will access hyperbolic function of next key pressed.
BIN, OCT, or HEX	Calculator is in binary, octal, or hexadecimal number mode.
STAT	Calculator is in 1-variable or 2-variable statistics mode.
DEG, RAD, or GRAD	Specifies angle-unit setting (degrees, radians, or grads). When you turn on the calculator, angle units are degrees.
x	x -coordinate of polar to rectangular conversion.
r	r -coordinate of rectangular to polar conversion.
()	1 or more open parentheses.

26-ENG

Error Conditions

When **Error** appears in the display, the calculator will not accept a keyboard entry until you press $\boxed{\text{CE/C}}$ to clear the error condition. ($\boxed{\text{CE/C}} \boxed{\text{CE/C}}$ clears the condition and all pending operations.)

General errors

- Result larger than $\pm 9.99999999 \times 10^{99}$.
- Division by zero.
- More than 15 open parentheses or 4 pending operations (1 in **STAT**).
- Log, ln, or $1/x$ of 0.
- Log, ln, or \sqrt{x} of $x < 0$.
- Even root of a negative number.
- 0 to the 0th power, or 0th root of any number.
- Rectangular to polar when x or y has an exponent > 63 .
- Tan of $x = 90^\circ, -90^\circ, 270^\circ, -270^\circ, 450^\circ$, etc.
- Sin^{-1} or cos^{-1} of x where $|x| > 1$.
- Tanh^{-1} of x where $|x| \geq 1$.
- $x!$ where x is not a positive integer ≤ 69 .
- Combinations or permutations when n and r are not positive integers.

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Statistical errors

- Data value x such that $|x| \geq 1 \times 1.0E64$.
- Removing the only data value with $\boxed{2nd}$ $[\Sigma-]$.
- \bar{x} , \bar{y} , σ_{xn} , σ_{yn} , σ_{xn-1} , σ_{yn-1} , correlation, intercept, slope, x' , or y' with no data values or σ_{xn-1} with one data value.
- Correlation, intercept, slope, x' , or y' of a vertical line.
- Correlation or x' of a horizontal line.
- Correlation, slope, intercept, x' , or y' with only one data point.

Number mode errors

- Result outside range for that number mode.
- Selecting BIN, OCT, or HEX when displayed number is outside range for that number mode.

In Case of Difficulty

- If the display is blank, expose the solar panel to adequate light. Press $\boxed{AC/ON}$ and try again.
- Review the operating instructions.

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Service Information

For General Information

Home Page: education.ti.com
KnowledgeBase
and E-mail
Inquires: education.ti.com/support
Phone: (800) TI-CARES; (800) 842-2737
For U.S., Canada, Mexico, Puerto
Rico, and Virgin Islands only
International
Information: education.ti.com/support
(Click the International Information
link.)

For Technical Support

KnowledgeBase
and Support by
E-mail: education.ti.com/support
Phone (not toll-free): (972) 917-8324

For Product (hardware) Service

**Customers in the U.S., Canada, Mexico, Puerto Rico
and Virgin Islands:** Always contact TI Customer
Support before returning a product for service.

All other customers: Refer to the leaflet enclosed with
this product (hardware) or contact your local TI
retailer/distributor.

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Rutherfordweg 102
3542 CG Utrecht-The Netherlands



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Tsuen Wan, N.T. Hong Kong

Printed in China