

TI-34 II Explorer Plus™

Scientific Calculator

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General Information

Examples: See the last page of these instructions for keystroke examples that demonstrate many of the TI-34 II functions. Examples assume all default settings.

[ON] turns on the TI-34 II. **[2nd] [OFF]** turns it off and clears the display. **APD™** (Automatic Power Down™) turns off the TI-34 II automatically if no key is pressed for about 5 minutes. Press **[ON]** after APD. The display, pending operations, settings, and memory are retained.

2-Line Display: The first line (**Entry Line**) displays an entry of up to 88 digits (or 47 digits for Stat or Constant Entry Line). Entries begin on the left; those with more than 11 digits scroll to the right. Press **[←]** and **[→]** to scroll the line. Press **[2nd] [←]** or **[2nd] [→]** to move the cursor immediately to the beginning or end of the entry.

The second line (**Result Line**) displays a result of up to 10 digits, plus a decimal point, a negative sign, a "x10" indicator, and a 2-digit positive or negative exponent. Results that exceed the digit limit are displayed in scientific notation.

Indicator	Definition
2nd	2nd function.
FIX	Fixed-decimal setting.
STAT	Statistical mode.
RAD	Angle mode set to radians.
—Q—	Displays quotient (Q) and remainder (R) for integer divide result.
—R—	
N/D→n/d	The fractional result can be further simplified.
↑ ↓	An entry is stored in memory before and/or after the active screen. Press [↵] and [↵] to scroll.
→ ←	An entry or menu displays beyond 11 digits. Press [←] and [→] to scroll.

2nd Functions: **[2nd]** displays the **2nd** indicator, and then selects the 2nd function (printed above keys) of the next key pressed. For example, **[2nd] [√] 25 [↵]** **[ENTER]** calculates the square root of 25 and returns the result, 5.

Menus: Certain TI-34 II keys display menus: **[MEMVAR]**, **[2nd] [RCL]**, **[STO→]**, **[2nd] [MATH]**, **[2nd] [FracMode]**, **[2nd] [LOG]**, **[2nd] [TRIG]**, **[2nd] [STAT]**, **[STATVAR]**, **[2nd] [EXIT STAT]**, **[PRB]**, **[2nd] [DR]**, **[↵]**, **[2nd] [R↔P]**, **[2nd] [FIX]**, and **[2nd] [RESET]**.

Press **[←]** and **[→]** to move the cursor and underline a menu item. To return to the previous screen without selecting the item, press **[CLEAR]**. To select a menu item:

- Press **[ENTER]** while the item is underlined, or
- For menu items followed by an argument value, enter the argument value while the item is underlined. The item and the argument value are displayed on the previous screen.

Previous Entries

After an expression is evaluated, use **[↵]** and **[↵]** to scroll through previous entries, which are stored in the TI-34 II memory. You cannot retrieve previous entries while in **STAT** mode.

Last Answer

[2nd] [ANS]

The most recently calculated result is stored to the variable **Ans**. **Ans** is retained in memory, even after the TI-34 II is turned off. To recall the value of **Ans**:

- Press **[2nd] [ANS]** (**Ans** displays on the screen), or
- Press any operations key (**[+]**, **[−]**, **[x²]**, etc.) as the first part of an entry. **Ans** and the operator are both displayed.

Order of Operations

The TI-34 II uses EOS™ (Equation Operating System) to evaluate expressions.

1st	Expressions inside parentheses.
2nd	Functions that need a) and precede the argument, such as the sin , log , and all R↔P menu items.
3rd	Fractions.
4th	Functions that are entered after the argument, such as x² and angle unit modifiers (° , ′ , ″ , τ).
5th	Exponentiation (^) and roots (x√).
6th	Negation (−).
7th	Permutations (nPr) and combinations (nCr).
8th	Multiplication, implied multiplication, division.
9th	Addition and subtraction.
10th	Conversions (A b/c ↔ d/e , ↔F , ↔D , ↔% , ↔DMS).
11th	[ENTER] completes all operations and closes all open parentheses.

Clearing and Correcting

[CLEAR]	<ul style="list-style-type: none"> • Clears an error message. • Clears characters on entry line. • Moves the cursor to last entry in history once display is clear.
[DEL]	Deletes the character at the cursor. Deletes all characters to the right when you hold down [DEL] ; then, deletes 1 character to the left of the cursor each time you press [DEL] .
[2nd] [INS]	Inserts a character at the cursor.
[2nd] [CLRVAR]	Clears all memory variables.
[2nd] [STAT] CLRDATA	Clears all data points without exiting STAT mode.
[2nd] [EXIT STAT] Y	Clears all data points and exits STAT mode.
[2nd] [RESET] Y or [ON] & [CLEAR]	Resets the TI-34 II. Returns unit to default settings; clears memory variables, pending operations, all entries in history, and statistical data; clears constant mode and Ans .

Math Operations

[2nd] [MATH]

[2nd] [MATH] displays a menu with various math functions. Some functions require you to enter 2 values, real numbers or expressions that equal return a real number. **[2nd] [,]** separates two values.

abs(#)	Displays absolute value of #.
round(#, digits)	Rounds # to specified number of digits.
iPart(#)	Returns only the integer part (iPart) or fractional part (fPart) of #.
fPart(#)	
min(#₁, #₂)	Returns the minimum (min) or maximum (max) of two values, # ₁ and # ₂ .
max(#₁, #₂)	
lcm(#₁, #₂)	Finds the least common multiple (lcm) or greatest common divisor (gcd) of two values, # ₁ and # ₂ .
gcd(#₁, #₂)	
#³	Calculates the cube of #.
3√(#)	Calculates the cube root of #.
remainder(#₁, #₂)	Returns the remainder resulting from the division of 2 values, # ₁ by # ₂ .

Integer Divide

[2nd] [INT÷]

[2nd] [INT÷] divides 2 positive integers and displays the quotient, **Q**, and the remainder, **R**. Only the quotient is stored to **Ans**.

Fractions

[2nd] [FracMode] [FAC] [A b/c ↔ d/e] [↔%]

[↵] [Simp] [F] [D]

Fractional calculations can display fractional or decimal results.

[2nd] [FracMode] displays a menu of 4 display mode settings. These determine how fraction results are displayed. You select 2 items:

- **A b/c** displays mixed number results.
- **d/e** (default) displays fraction results.
- **Manual** (default) displays unsimplified fractions.
- **Auto** displays fraction results simplified to lowest terms.

[UNIT] separates a whole number from the fraction in a mixed number, and **[↵]** separates a numerator from the denominator. The denominator must be a positive integer. To negate a fraction, press **[−]** before entering numerator.

[Simp] [ENTER] simplifies a fraction using the lowest common prime factor. If you want to choose the factor (instead of letting the calculator choose it), press **[Simp]**, enter the factor (an integer), and then press **[ENTER]**.

[2nd] [FAC] displays **Fac** on the entry line and the divisor used to simplify the last fraction result. You must be in **Manual** mode to display **Fac**. Press **[2nd] [FAC]** again to toggle back to the simplified fraction.

[D] converts a fraction to a decimal, if possible.

[F] converts a decimal to a fraction, if possible.

[2nd] [↔%] converts a decimal or fraction to a percent.

[2nd] [A b/c ↔ d/e] converts between a mixed number and a simple fraction.

Pi

[π]

$\pi = 3.141592653590$ for calculations. $\pi = 3.141592654$ for display. In **RAD** mode, π is represented as **Pi** in results of multiplication or fractional calculations. The TI-34 II only accepts π in the numerator of a fraction.

Angle Modes

[2nd] [DR] [↵]

[2nd] [DR] displays a menu to change the Angle mode to degrees or radians.

[↵] displays a menu to specify the Angle unit modifier—degrees (**°**), minutes (**′**), seconds (**″**), radians (**τ**), or **DMS** (convert an angle to DMS notation).

To set the Angle mode for any part of an entry:

- Select the Angle mode. Entries are interpreted and results displayed according to the Angle mode, or
- Select a unit modifier (**°**, **′**, **″**, **τ**) for any part of an entry. Entries with unit modifiers are interpreted accordingly, overriding the Angle mode.

To convert an entry:

- Set the Angle mode to the unit you want to convert to. Then use a unit modifier to designate the unit to convert from. (Angles of trigonometric functions convert values inside parentheses first.), or
- Select **DMS**, which converts an entry to DMS (**°**, **′**, **″**) notation.

Trig and Logarithms

[2nd] [TRIG] [LOG]

[2nd] [TRIG] displays a menu of all trigonometric functions (**sin**, **sin⁻¹**, **cos**, **cos⁻¹**, **tan**, **tan⁻¹**). Select the trigonometric function from the menu and then enter the value. Set the desired Angle mode before starting trigonometric calculations.

[2nd] [LOG] displays a menu of all log functions (**log**, **10^x**, **ln**, **e^x**). Select the log function from the menu, then enter the value, and complete it with **[↵] [ENTER]**.

Rectangular↔Polar

[2nd] [R↔P]

[2nd] [R↔P] displays a menu to convert rectangular coordinates (x,y) to polar coordinates (r,θ) or vice versa. Set Angle mode, as necessary, before starting calculations.

Stored Operations **[OP1]** **[OP2]** **[2nd]** **[OP1]** **[OP2]**

The TI-34 II stores two operations, **OP1** and **OP2**. To store an operation to **OP1** or **OP2** and recall it:

1. Press **[2nd]** **[OP1]** or **[2nd]** **[OP2]**.
2. Enter the operation (any combination of numbers, operators, or menu items and their arguments).
3. Press **[ENTER]** to save the operation to memory.
4. **[OP1]** or **[OP2]** recalls and displays the operation on the entry line. The TI-34 II automatically calculates the result (without pressing **[ENTER]**) and displays the counter (as space permits) on the left side of the result line.

You can set the TI-34 II to display only the counter and the result (excluding the entry). Press **[2nd]** **[OP1]** or **[2nd]** **[OP2]**, press **[C]** until the = is highlighted (**=**) and press **[ENTER]**. Repeat to toggle this setting off.

Memory **[MEMVAR]** **[STO]** **[2nd]** **[RCL]** **[CLRVAR]**

The TI-34 II has 5 memory variables—A, B, C, D, and E. You can store a real number or an expression that results in a real number to a memory variable.

- **[MEMVAR]** accesses the menu of variables.
- **[STO]** lets you store values to variables.
- **[2nd]** **[RCL]** recalls the values of variables.
- **[2nd]** **[CLRVAR]** clears all variable values.

Notation **[2nd]** **[FIX]** **[EE]**

[2nd] **[FIX]** displays the **decimal notation** mode menu. These settings *only* affect the display of results. **F** (default) restores Floating-decimal format. Set decimal places to *n* (0–9) with **0123456789**.

[EE] enters a value in **scientific notation**. Press **[=]** before entering a negative exponent.

Stats **[2nd]** **[STAT]** **[EXIT STAT]** **[DATA]** **[STATVAR]**

1-VAR stats analyzes data from 1 data set with 1 measured variable, **X**. **2-VAR** stats analyzes paired data from 2 data sets with 2 measured variables—**X**, the independent variable, and **Y**, the dependent variable. You can enter up to 42 data sets.

Steps for defining statistical data points:

1. Press **[2nd]** **[STAT]**. Select **1-VAR** or **2-VAR** and press **[ENTER]**. The **STAT** indicator displays.
2. Press **[DATA]**.
3. Enter a value for **X₁** and press **[C]**.
4. Then:
 - In **1-VAR** stat mode, enter the frequency of occurrence (**FRQ**) of the data point and press **[C]**. **FRQ** default=1. If **FRQ=0**, the data point is ignored. Or
 - In **2-VAR** stat mode, enter the value for **Y₁** and press **[C]**.
5. Repeat steps 3 and 4 until all data points are entered. You must press **[ENTER]** or **[C]** to save the last data point or **FRQ** value entered. If you add or delete data points, the TI-34 II automatically reorders the list.
6. When all points and frequencies are entered:
 - Press **[STATVAR]** to display the menu of variables (see table for definitions) and their current values, or
 - Press **[DATA]** to return to the blank **STAT** screen. You can do calculations with data variables (**\bar{x}** , **\bar{y}** , etc.). Select a variable from the **[STATVAR]** menu and then press **[ENTER]** to evaluate the calculation.
7. When finished:
 - Press **[2nd]** **[STAT]** and select **CLRDATA** to clear all data points *without* exiting **STAT** mode, or
 - Press **[2nd]** **[EXIT STAT]** **[ENTER]** to clear all data points, variable and **FRQ** values, and to exit **STAT** mode (**STAT** indicator turns off).

Variables	Definition
n	Number of X or (X, Y) data points.
\bar{x} or \bar{y}	Mean of all X or Y values.
Sx or Sy	Sample standard deviation of X or Y.
σ_x or σ_y	Population standard deviation of X or Y.
Σx or Σy	Sum of all X or Y values.
Σx^2 or Σy^2	Sum of all X ² or Y ² values.
Σxy	Sum of X*Y for all XY pairs.
a	Linear regression slope.
b	Linear regression Y-intercept.
r	Correlation coefficient.
X' (2-VAR)	Uses a and b to calculate predicted X value when you input a Y value.
Y' (2-VAR)	Uses a and b to calculate predicted Y value when you input an X value.

Probability **[PRB]**

nPr	Calculates the number of possible permutations of n items taken r at a time, given n and r . The order of objects is important, as in a race.
nCr	Calculates the number of possible combinations of n items taken r at a time, given n and r . The order of objects is not important, as in a hand of cards.
!	A factorial is the product of the positive integers from 1 to n . n must be a positive whole number ≤ 69 .
RAND	Generates a random real number between 0 and 1. To control a sequence of random numbers, store an integer (seed value) ≥ 0 to rand . The seed value changes randomly every time a random number is generated.
RANDI	Generates a random integer between 2 integers, A and B , where $A \leq \text{RANDI} \leq B$. Separate the 2 integers with a comma.

Errors

ARGUMENT — A function does not have the correct number of arguments.

DIVIDE BY 0 —

- You attempted to divide by 0.

• In statistics, $n=1$.

DOMAIN — You specified an argument to a function outside the valid range. For example:

- For $x\sqrt{\quad}$: $x = 0$ or $y < 0$ and x not an odd integer.

- For y^x : y and $x = 0$; $y < 0$ and x not an integer.

- For \sqrt{x} : $x < 0$.

- For **LOG** or **LN**: $x \leq 0$.

- For **TAN**: $x = 90^\circ$, -90° , 270° , -270° , 450° , etc.

- For **SIN⁻¹** or **COS⁻¹**: $|x| > 1$.

- For **nCr** or **nPr**: **n** or **r** are not integers ≥ 0 .

- For **x!**: x is not an integer between 0 and 69.

EQ LENGTH ERROR — An entry exceeds the digit limits (88 for Entry Line and 47 for Stat or Constant Entry lines); for example, combining an entry with a constant that exceeds the limit.

FRACMODE — Pressing **[Simp]** when **Fracmode=Auto**.

FRQ DOMAIN — **FRQ** value (in **1-VAR** stats) < 0 or > 99 , or not an integer.

OP — Pressing **[OP1]** or **[OP2]** when constants not defined or while in **STAT** mode.

OVERFLOW — $|\theta| \geq 1E10$, where θ is an angle in a trigonometric, hyperbolic, or **RPr** function.

STAT —

- Pressing **[STATVAR]** with no defined data points.

- When not in **STAT** mode, pressing **[DATA]**, **[STATVAR]**, or **[2nd]** **[EXIT STAT]**.

SYNTAX — The command contains a syntax error: entering more than 23 pending operations, 8 pending values, or having misplaced functions, arguments, parentheses, or commas.

Battery Replacement

Replace protective cover. Place the TI-34 II face down.

1. Using a small Phillips screwdriver, remove screws from back case.

2. Starting from the bottom, carefully separate front from back. **Caution:** Be careful not to damage any internal parts.

3. Using a small Phillips screwdriver, if necessary, remove old battery; replace with new one.

Caution: Avoid contact with other TI-34 II components while changing the battery.

4. If necessary, press **[ON]** and **[CLEAR]** at the same time to reset the TI-34 II (clears memory and all settings).

Caution: Dispose of old batteries properly. Do not incinerate batteries or leave where a child can find them.

In Case of Difficulty

Review instructions to be certain calculations were performed properly.

Press **[ON]** and **[CLEAR]** at the same time. This clears all memory and settings.

Check the battery to ensure that it is fresh and properly installed.

Change the battery when:

- **[ON]** does not turn the unit on, or
- The screen goes blank, or
- You get unexpected results.

To continue using the TI-34 II* until you can change the battery:

1. Expose the solar panel to brighter light.
2. Press **[ON]** and **[CLEAR]** at the same time to reset the calculator. This clears all settings and memory.

* Operates in well-lit areas using solar cell. Operates in other light settings using battery.

Support and Service Information

Product Support

Customers in the U.S., Canada, Puerto Rico, and the Virgin Islands

For general questions, contact Texas Instruments Customer Support:

phone: 1-800-TI-CARES (1-800-842-2737)
e-mail: ti-cares@ti.com

For technical questions, call the Programming Assistance Group of Customer Support:

phone: 1-972-917-8324

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Contact TI by e-mail or visit the TI calculator home page on the World Wide Web.

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Warranty Information

Customers in the U.S. and Canada Only

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All Customers Outside the U.S. and Canada

For information about the length and terms of the warranty, refer to your package and/or to the warranty statement enclosed with this product, or contact your local Texas Instruments retailer/distributor.

\leftarrow \rightarrow \uparrow \downarrow	1 $\boxed{+}$ 1 \boxed{ENTER} Mon 3:04pm	1+1 \uparrow 2.
	2 $\boxed{+}$ 2 \boxed{ENTER}	2+2 \uparrow 4.
	3 $\boxed{+}$ 3 \boxed{ENTER}	3+3 \uparrow 6.
	4 $\boxed{+}$ 4 \boxed{ENTER}	4+4 \uparrow 8.
	\leftarrow \rightarrow \leftarrow	2+2 \updownarrow
\leftarrow \rightarrow	2 \boxed{nd} $\boxed{+}$ 2 \boxed{ENTER}	2+2+2 \uparrow 6.

$\boxed{2nd}$ \boxed{ANS}	3 $\boxed{\times}$ 3 \boxed{ENTER}	3x3 \uparrow 9.
	$\boxed{\times}$ 3 \boxed{ENTER}	Ans x3 \uparrow 27.
	3 $\boxed{2nd}$ $\boxed{\sqrt{x}}$ $\boxed{2nd}$ \boxed{ANS} \boxed{ENTER}	3x \sqrt{Ans} \uparrow 3.

$\boxed{+}$ $\boxed{-}$ $\boxed{\times}$ $\boxed{\div}$ $\boxed{\leftarrow}$ $\boxed{\rightarrow}$ $\boxed{2nd}$ $\boxed{INT\div}$ \boxed{ENTER}	+ x \div - 5 $\boxed{\times}$ $\boxed{(-)}$ 12 $\boxed{+}$ 45 \boxed{ENTER}	5x-12+45 \uparrow -15.	
	(-)		
	INT \div	10 $\boxed{2nd}$ $\boxed{INT\div}$ 2 \boxed{ENTER}	10 Int \div 2 \uparrow 5 0 — Q — R —
	()	4 $\boxed{\times}$ $\boxed{(}$ 2 $\boxed{+}$ 3 $\boxed{)}$ \boxed{ENTER}	4x(2+3) \uparrow 20.
		4 $\boxed{(}$ 2 $\boxed{+}$ 3 $\boxed{)}$ \boxed{ENTER}	4(2+3) \uparrow 20.

$\boxed{2nd}$ \boxed{MATH}	abs, iPart, fPart, $\sqrt[3]{}$	$\boxed{2nd}$ \boxed{MATH} $\boxed{\rightarrow}$ $\boxed{\rightarrow}$	iPart fPart \rightarrow
	23.45 $\boxed{}$ \boxed{ENTER}		iPart(23.45) \uparrow 23.
	round	$\boxed{2nd}$ \boxed{MATH} $\boxed{\rightarrow}$	abs round \rightarrow
		$\boxed{\pi}$ $\boxed{2nd}$ $\boxed{,}$ 3 $\boxed{}$ \boxed{ENTER}	round(π ,3) \uparrow 3.142
	min, max, lcm, gcd, remainder	$\boxed{2nd}$ \boxed{MATH} $\boxed{\leftarrow}$	\leftarrow remainder
	10 $\boxed{2nd}$ $\boxed{,}$ 6 $\boxed{}$ \boxed{ENTER}		remainder(10,6) \uparrow 4.

$\boxed{2nd}$ $\boxed{\%}$	$\boxed{2nd}$ $\boxed{\rightarrow\%}$	%	5 $\boxed{2nd}$ $\boxed{\%}$ $\boxed{\times}$ 250 \boxed{ENTER}	5% \times 250 \uparrow 12.5
		$\rightarrow\%$	1 $\boxed{\%}$ 2 $\boxed{2nd}$ $\boxed{\rightarrow\%}$ \boxed{ENTER}	1/2 $\rightarrow\%$ \uparrow 50%

\boxed{UNIT} $\boxed{\rightarrow}$ $\boxed{\rightarrow Simp}$ $\boxed{2nd}$ $\boxed{[FracMode]}$ $\boxed{[FAC]}$	$\boxed{2nd}$ $\boxed{[FracMode]}$ =A \rightarrow b/c; Manual	/	3 $\boxed{+}$ 1 \boxed{UNIT} 8 $\boxed{\%}$ 12 \boxed{ENTER}	3 + 1 \rightarrow 8/12 \uparrow 4 \rightarrow 8/12 N/D \rightarrow n/d
		Simp	$\rightarrow Simp$ \boxed{ENTER}	Ans $\rightarrow Simp$ \uparrow 4 \rightarrow 4/6 N/D \rightarrow n/d
			$\rightarrow Simp$ 2 \boxed{ENTER}	Ans $\rightarrow Simp$ 2 \uparrow 4 \rightarrow 2/3
		FAC	$\boxed{2nd}$ $\boxed{[FAC]}$	Fac \uparrow 2
			$\boxed{2nd}$ $\boxed{[FAC]}$	Ans $\rightarrow Simp$ 2 \uparrow 4 \rightarrow 2/3

$\boxed{2nd}$ $\boxed{[A\leftrightarrow b\leftrightarrow c\leftrightarrow d\leftrightarrow e]}$ $\boxed{\rightarrow D}$ $\boxed{\rightarrow F}$	$\boxed{2nd}$ $\boxed{[FracMode]}$ =d/e; Manual	A b/c \leftrightarrow d/e	9 $\boxed{\%}$ 2 $\boxed{2nd}$ $\boxed{[A\leftrightarrow b\leftrightarrow c\leftrightarrow d\leftrightarrow e]}$ \boxed{ENTER}	9 \rightarrow A b/c \leftrightarrow d/e \uparrow 4 \rightarrow 1/2
		$\rightarrow D$	$\rightarrow D$ \boxed{ENTER}	Ans $\rightarrow D$ \uparrow 4.5
		$\rightarrow F$	$\rightarrow F$ \boxed{ENTER}	Ans $\rightarrow F$ \uparrow 45/10 N/D \rightarrow n/d
		$\boxed{2nd}$ $\boxed{[FracMode]}$ =A \rightarrow b/c; Auto	$\rightarrow F$ \boxed{ENTER}	Ans $\rightarrow F$ \uparrow 4 \rightarrow 1/2

$\boxed{x^2}$ $\boxed{\wedge}$ $\boxed{2nd}$ $\boxed{[x^{-1}]}$ $\boxed{\sqrt{}}$ $\boxed{\sqrt[3]{}}$	$\boxed{2nd}$ $\boxed{[FracMode]}$ =d/e; Manual	x^{-1}	2 $\boxed{\times}$ $\boxed{(}$ 1 $\boxed{\%}$ 2 $\boxed{)}$ $\boxed{2nd}$ $\boxed{[x^{-1}]}$ \boxed{ENTER}	2x(1/2) $^{-1}$ \uparrow 4/1
		x^2	2 $\boxed{x^2}$ $\boxed{+}$ 2 \boxed{ENTER}	2 2 +2 \uparrow 6.
		$\sqrt{\quad}$	$\boxed{2nd}$ $\boxed{\sqrt{}}$ 25 $\boxed{}$ \boxed{ENTER}	$\sqrt{(25)}$ \uparrow 5.
		\wedge	5 $\boxed{\wedge}$ 3 \boxed{ENTER}	5 3 \uparrow 125.
		$x\sqrt{\quad}$	3 $\boxed{2nd}$ $\boxed{\sqrt{x}}$ 8 \boxed{ENTER}	3 x $\sqrt{8}$ \uparrow 2.

[2nd] [DR] [π] [0.00]		
DR	[CLEAR]	↑
	[2nd] [DR] [↻]	DEG RAD
	[ENTER]	↑ RAD
π	[π] 3 [x²] [ENTER]	π3² ↑ 9Pi. RAD
TRIG	[2nd] [TRIG]	sin sin⁻¹ → RAD
° ' "	30 [0.00]	° ' " r → RAD
	[ENTER] [1] [ENTER]	sin(30°) ↑ 0.5 RAD
DR	[CLEAR] [2nd] [DR] [↻]	DEG RAD RAD
° ' "	[ENTER] 2 [π] [0.00] [↻] [↻]	° ' " [] →
	[ENTER] [ENTER]	2π ↑ 360.
° ' "	1.5 [0.00] [↻]	← ▶DMS
	[ENTER] [ENTER]	1.5 ▶DMS ↑ 1°30'0"

[2nd] [TRIG]		
TRIG	[2nd] [TRIG] [↻]	← tan tan⁻¹ ↑
	45 [1] [ENTER]	tan(45) ↑ 1.
DR	[2nd] [DR] [↻]	DEG RAD
	[ENTER] [ENTER]	tan(45) ↑ 1.619775191 RAD

[2nd] [R↔P]		
R↔P	[2nd] [R↔P]	R▶Pr R▶Pθ →
	5 [2nd] [,] 30 [1] [ENTER]	R▶Pr (5,30) ↑ 30.41381265
	[↻] [2nd] [R↔P] [↻]	R▶Pr R▶Pθ →
	[ENTER] [ENTER]	R▶Pθ (5,30) ↑ 80.53767779

[2nd] [LOG]		
LOG	[2nd] [LOG]	log 10^ → 0.
	1 [1] [ENTER]	log(1) ↑ 0.
	[2nd] [LOG] [↻]	← ln e^ ↑
	.5 [1] [ENTER]	e^(.5) ↑ 1.648721271

e=2.71828182846

[2nd] [↵OP1]	[2nd] [↵OP2]	[OP1]	[OP2]
▶OP1	[2nd] [↵OP1] [x] 2 + 3 [ENTER]	OP1=x2+3	
OP1	4 [OP1]	4x2+3 ↑ 11.	
	6 [OP1]	6x2+3 ↑ 15.	
▶OP2	[2nd] [↵OP2] [x] 2 [↻] [↻] [ENTER]	OP2=■x2	
OP2	4 [OP2]	1 8.	
	[OP2]	2 16.	
	[OP2]	3 32.	
	[2nd] [↵OP2] [↻] [ENTER]	OP2 =x2	

[2nd] [CLRVAR]	[STO▶]	[2nd] [RCL]	[MEMVAR]
CLRVAR	[2nd] [CLRVAR] [ENTER]		CLR VAR: Y N
STO▶	15 [STO▶]		→ A B C D E →
	[ENTER]		15→A ↑ 15.
	[π]		π ↑
RCL	[2nd] [RCL]		A B C D E 15.
	[ENTER] [x²] [ENTER]		π15² ↑ 706.8583471
	[STO▶] [↻]		→ A B C D E →
	[ENTER]		Ans→B ↑ 706.8583471
MEM VAR	[MEMVAR] [↻]		A B C D E 706.8583471
	[ENTER] [÷] 4 [ENTER]		B÷4 ↑ 176.7145868

[2nd] [FIX] [EE]		
FIX	[π] [ENTER]	π ↑ 3.141592654
	[2nd] [FIX]	E0123456789
	2	π ↑ FIX 3.14
	[2nd] [FIX] [↻]	π ↑ 3.141592654
EE	1.234 [EE] [(-) 65 [ENTER]	1.234 E-65 ↑ 1.234 x10 ⁻⁶⁵



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