

# General CAS Information [Casio]

## Menu



opens the home menu

## Calculator



**Main** or  $\sqrt{\alpha}$  takes you to the main calculator.

## Operations

The four basic operation buttons are on the physical keypad.



To run the calculation press the **EXE** button. The **=** button on the left will insert an equals sign.

You can press **EXE** with the cursor anywhere in the entry line, it does not need to be at the end.

You can edit any previous calculation at any time. Press **EXE** to run the edited calculation(s).

To delete a character entered in the editing line press **←**.

To remove all that is written on a line press **Clear**.



To delete a calculation go to Edit, then select Delete to remove the calculation with the cursor in it.

To clear all calculations, go to Edit, then select Clear All

Be careful as there are two similar signs: Minus: **-** (on the right) and Negative: **(-)** (next to 0). The negative button is for writing negative numbers, the minus is for doing subtractions. The Casio uses the same symbol for both so the only problem is when you want a negative number first:

- For  $-3 + 2$ : if you use the minus sign for the negative, the CAS will write ans- as it is assuming you want to subtract something from the previous calculation.



Other useful buttons are stored on the digital keyboard which is access by pressing **Keyboard**. The digital keyboard is grouped into tabs on the left.

Fractions can be entered by using  in the digital keyboard or using **Shift** .

The powers and roots buttons are mostly in the digital keyboard.

Square:   Square Root: 

To the power of ...:   $x$ th Root of: 

The 'to the power of' button  is also on the physical keyboard. **Shift**  gives the root.

Scientific Notation can be written quickly using **EXP** for  $\times 10^{\square}$ . The number written after the E is the index you want for 10.

For log base 10 of  $x$ :  or **Shift** **6**  $\log(10, x) = \log_{10}(x)$

The percent symbol, %, can be accessed through the [abc] then [symbol] tab on the virtual keyboard.

## Converting Between Approximate and Fraction Answers

There are two ways of doing the conversions:

- 1) Use the  $\frac{1}{2} \rightarrow \frac{0.5}{1}$  /  $\frac{0.5}{1} \rightarrow \frac{1}{2}$  button to change the selected calculation to the opposite
- 2) Change the setting from Standard to Decimal for approximations and Decimal to Standard for exact

Copy



Shift =

Cut



Shift X

Paste



Shift Y

Undo / Redo

Edit → Undo / Redo

Shift Z

You can highlight then drag and drop your selection to copy and paste as well.

## Using the Previous Answer in Calculations

ans or Shift EXE inserts ans which recalls the previous answer

Each time you hit enter uses the new previous answer

## Rounding


You can change the default rounding for all calculations or round one specific calculation.

To round one calculation type or look up in the Catalogue

Decimal Places: fRound(number, decimal places)

Significant Figures: sRound(number, significant figures)

To change the rounding of all calculations:

Press  at the top left of the screen then Basic Format.

Number Format:

- Normal 1: Only uses scientific notation is the number is bigger than  $10^{10}$  or smaller than  $10^{-2}$
- Normal 2: Only uses scientific notation is the number is bigger than  $10^{10}$  or smaller than  $10^{-9}$
- Fix: 0-9: Set the number of decimal places
- Sci: 0-9: Set the number of significant figures and write in scientific notation

## List of Physical Button Shortcuts

Shift = : Copy    Shift X : Cut    Shift Y : Paste    Shift Z : Undo

Shift  $\frac{\square}{\square}$  :  $\frac{\square}{\square}$     Shift  $\wedge$  :  $\sqrt{\square}$

Shift ( : t    Shift ) :  $\theta$     Shift , : |    Shift (-) :  $\Rightarrow$

Shift 0 :  $\pi$     Shift • : i    Shift EXP :  $\infty$     Shift EXE : Ans

Shift 4 :  $e^{\square}$     Shift 5 :  $\ln(\square)$     Shift 6 :  $\log_{\square}(\square)$

Shift 1 :  $\sin(\square)$     Shift 2 :  $\cos(\square)$     Shift 3 :  $\tan(\square)$