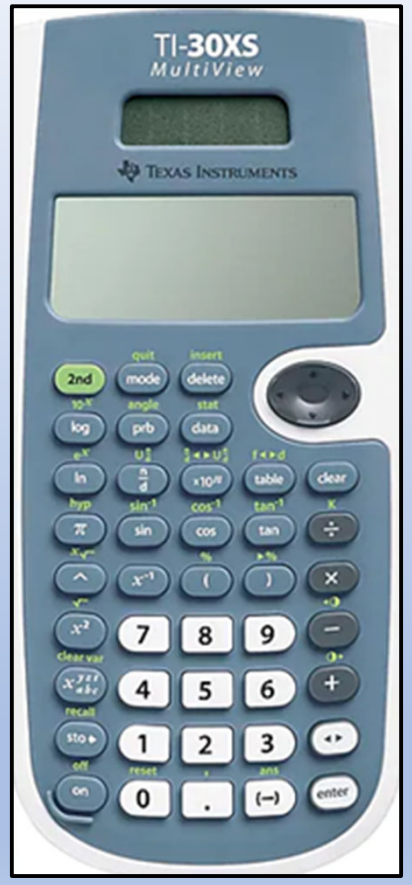


TI-30XS Multiview Calculator

The only calculator permitted on any GED© Exams.

All students need to familiar with using this device.

The GED® Exam has an onscreen version.

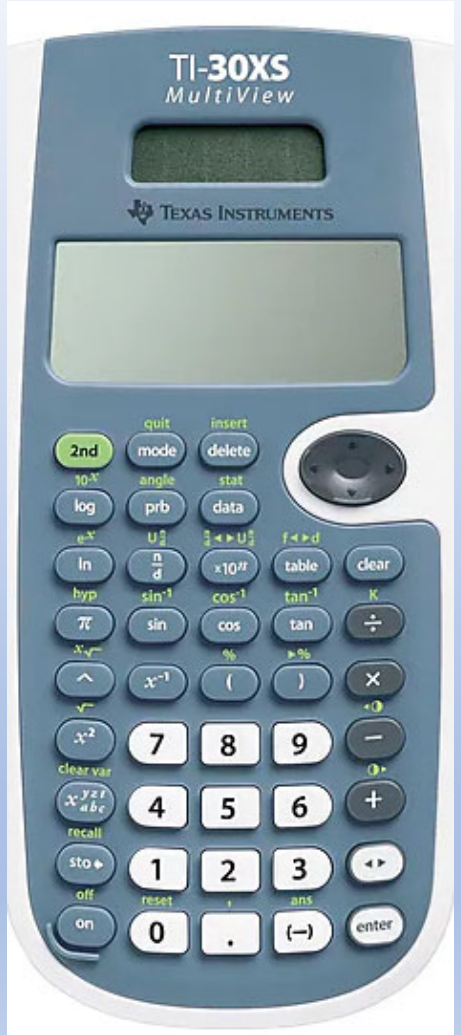
TI30XS Multiview Handheld

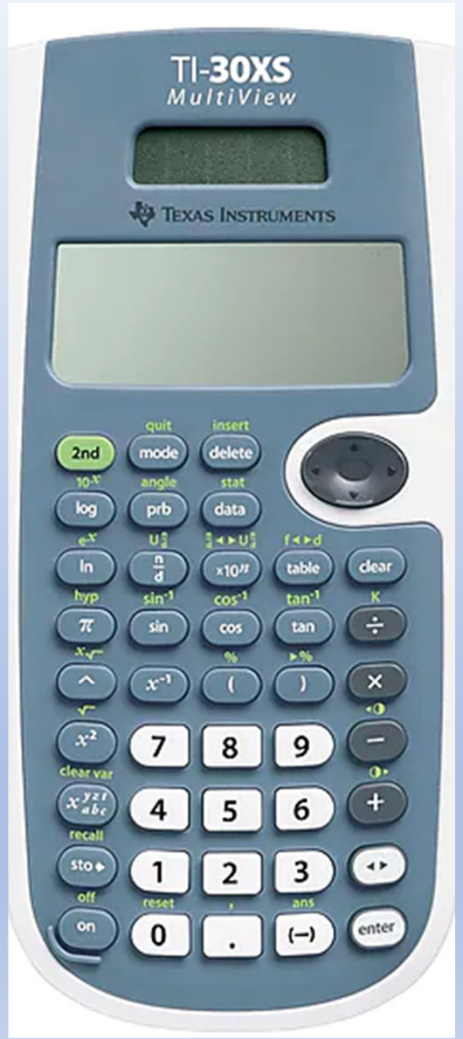
The handheld version of the calculator my be used when you visit a testing session at a certified GED© Testing Site.

The words “MEMORY CLEARED” must be in the display upon entering the test session. With the calculator on, press the follow key sequence: 2nd 0 2. This clears all memory and all previous work.

Some tutoring services may loan the student a calculator. Others suggest you purchase your own. It is available for order at Amazon, Target, Walmart, Office Depot, and other locations.

The cost ranges from $18-35.





TI-30XS Desktop Versions

Teachers may use one of these layout versions on their computer to assist in teaching students how to use the calculator.

For students, one of these versions will be available on the following GED© exams:

a. Mathematics Reasoning
   Only after first 5 problems are solved
b. Science
c. Social Studies

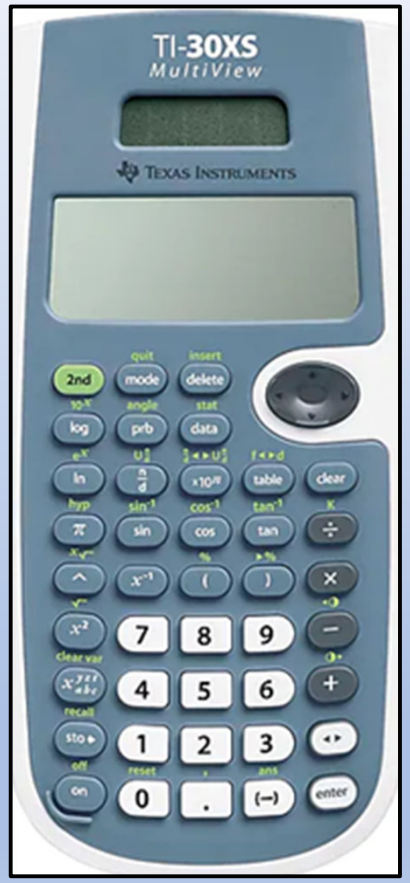
Free TI-30XS Multiview Emulator

Cannot be used on the GED Exam!

The designs on the previous page are the **official** Texas Instrument designs. They are the only designs allowed during testing. Students may use their personal handheld during in person testing. Otherwise, they will use one of the desktop computer designs like one of the two on the previous page.

The design on the right one **is not permitted** during testing! It is a free app for android phones only. It emulates most functions well with some variations.

Go to the Android Play Store and search for Calc30.



At first glance, the **TI-30XS Multiview Calculator** is an imposing device. This is due to most keys having two functions. The second function is indicated with the only green key on the keyboard with [2nd] on it.

On HSE tests like the GED® Exam, there are many keys will never be used. The logarithmic and trigonometry are not used for the current test. This eliminates six (6) keys and their secondary functions. {[log], [ln], [sin], [cos], [tan], [sto▸], and possibly [data]}

On the plus side, the calculator can compute any fraction, decimal, percent, or mixed fraction-decimal-percent combinations with ease. Also, it can assist in making function tables, probability, permutation, combinations, and more computations test on the exam.

The "**MEMORY CLEARED**" screen is mandatory for all who bring a calculator into the testing room. The testee presses "[2nd] [0] [2]".

The 2nd key and the mode key

2nd Function Key (**green**)

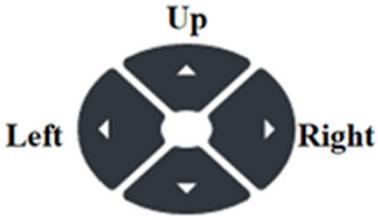
Gives access to **green functions** above the key pressed.

mode key opens the screen below:

These settings are best for GED exam.

quit, 2nd mode, exits you from various modes of the calculator. Example, **mode** screen above to calculator mode. Also, **prb**, **data**, **table**.

Cursor Keys



Cursor Keys

Normal Cursor is a black square: ■

- The normal cursor blinks as one types in values on a line.
- The cursor keys can move the cursor to a desired location.
- When pressed, the **delete** key deletes the value under cursor or to the left of cursor if no value is under the cursor.

Insert Cursor is a black underscore: _

- Pressing 2nd delete, turns on the **insert** cursor. This allows the user to type new values or operations to the left of the cursor while move the character to the right. This allows the user to correct minor mistakes in typing.
- **Exit Cursor** is black blinking one with a white > inside it; press ▶ to exit.

Content Control Keys delete clear ◀▶ enter

These keys with the above Cursor keys and the delete/insert key allow the users to edit errors in the inputting a calculation without retyping every detail from the beginning. This is like editing content in a word processor.

insert
delete

clear current line (press once)
When cursor is within the text, it clears from insert point to the right.
clear screen (press twice) **Does NOT Clear Memory**

◀▶ Toggles between rational decimal and fraction forms whenever it is possible. Will not change an apparent irrational decimals to a fraction.

enter Enters the current line on screen for evaluation.

The Fraction $\frac{n}{d}$ Key + 2nd Functions for Fractions

The $\frac{n}{d}$ key is used to enter a **common fractions** two-thirds is 2 $\frac{n}{d}$ 3 ▶ enter, displays $\frac{2}{3}$ on the screen. For **mixed numbers** like four and three-fourths use 2nd $\frac{n}{d}$, enter 4 2nd $\frac{n}{d}$ 3 ▼ 4 ▶ enter, displays $4\frac{3}{4}$ on the screen.

Three other key can modify fraction mode: $\times 10^n$, table, and ◀▶. The last two have similar functions. Whenever one of the keys is entered after a fraction form it will toggle to the other format shown in the green note.

1. *fraction* 2nd $\times 10^n$, toggles the user between a fraction and a mixed number.
2. *fraction/decimal* 2nd table or just *fraction/decimal* ◀▶ returns a *decimal/fraction*. If a decimal seems to be irrational no fraction return only the decimal.

Scientific Notation [×10^n] key and mode

The TI-30 will convert values greater than 10 billion to scientific or smaller than 1 billionth into scientific notation when it is not in scientific notation mode. In scientific notation mode, all values will be in scientific notation. It is not recommended to use the scientific notation mode on the HSE exams.

The [×10^n] key enters values in **scientific notation** for calculations 3.15×10^{12} is entered as follows: [3][·][1][5][×10^n][1][2][▶], add next value(s) until operation is done.

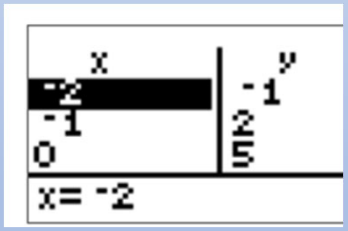
Scientific notation calculations will normally be needed on the math and science HSE exams.

Values in scientific notations can be enter anywhere numbers are used, other than writing the number in scientific notation no special handling is required. Students are required to know how to write/use numbers in scientific notation.

Table key table (linear example)

The table key allows the user to **enter any function in x and create a table of x and y values** for the function. This can easily be used for linear and quadratic functions use on the HSE exam. There is no graphing function in this calculator, so students need to know how to graph ordered pairs.

To graph y = 3x + 5, table 3 x^{yzt}_{abc} + 5 enter
A **Start** value for x needs to be selected and entered: (−) 2 enter
A **Step** value is needed, default is 1: enter
Select **Auto** by pressing enter
Press enter on **OK**, next screen on the right.



A **Step** value of 1 is fine for many linear functions; however, if the coefficient of x has a denominator, the Step value works best if it is a factor of the denominator.

Table key table (quadratic example)

The table key allows the user to **enter any function in x and create a table of x and y values** for the function. This can easily be used for linear and quadratic functions use on the HSE exam. There is no graphing function in this calculator, so students need to know how to graph ordered pairs.

To graph $y = 3x^2 + 5x - 6$, table 3 x^{yzt}_{abc} x^2 + 5 x^{yzt}_{abc} − 6 enter
A **Start** value for x needs to be selected and entered: (−) 2 enter
A **Step** value is needed, default is 1: enter
Select **Auto** by pressing enter
Press enter on **OK**, next screen on the right.

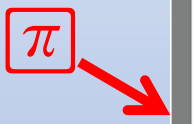
Pi key [π] =3.141592654 vs 3.14

The pi key, [π], is very useful on HSE exams; it allows the user to save time and keystrokes during testing.
The exam test writers use π = 3.14 on the exam answers which require typing 4 characters and an operation to use.
The [π] key needs 1 key stroke and the operation, a savings of 2 keystrokes.
Example: Find the area of a circle with radius 3. $A = \pi r^2$.

$3.14 \times 3^2 = 28.26$ $\quad\quad$ $\pi \times 3^2 = 28.27433388 \approx 28.27$

[3] [·] [1] [4] [×] [3] [x^2] enter $\quad\quad$ [π] [×] [3] [x^2] [◂▸] enter

If you use it, it is important to recall your answers will be slightly larger usually at the 4th digit. The test writers use the 3.14 for the test solutions. Use only on multiple choice solutions.
When using [◂▸], it is only needed if there is no value decimal being used in the calculation. If you forget to use, pressing the key will change the format.



Powers keys: caret [^] and square [x²]

Using the [2nd] key, the roots of a value are found.

The caret key, [^], allows the user to raise any value to any power. Mostly, used for cubing values or finding cube root values on HSE test, $16^3 = 4096$, entered as follows: 16^3 ➔ [1][6][^][3][▶][enter]. The [2nd][^] function finds the inverse of the basic key defined the root calculation, $\sqrt[3]{4096}$ ➔ [3][2nd][^][4][0][9][6][▶][enter], which results in 16.

Also, the caret key is used with statistical counting (next page).

The square key, [x²], squares a value while its second function, [2nd][x²], finds the square root of a value. Example, $16^2 = 256$, [1][6][^][2][enter]; and $\sqrt{256} = 16$, [2nd][x²][2][5][6][▶][enter].

prb Probability Functions Key

The prb is used to find **Permutations (nPr), Combinations (nCr), and Factorials (!)**. The second function angle is not used on the HSE test.

The Menu for PRB is $\begin{cases} 1: nPr \\ 2: nCr \\ 3: \ ! \end{cases}$

Permutations: returns the total number of ways n things taken r at time occur.

Combinations: returns the number unique ways n things taken r at a time occur.

Factorials: returns the number of ways n things can be arranged. Ex: 4! = 1•2•3•4 = 24

Any questions?


Texas Instruments
TI-30XS
MultiView
DEG
MEMORY CLEARED
quit
insert
2nd
mode
delete
10^x
angle
stat
log
prb
data
e^x
ln
table
clear
hyp
sin⁻¹
cos⁻¹
tan⁻¹
K
sin
cos
tan
%
clear var
recall
sto→
off
reset
ans
on
0
enter

The End