GED Scientific Calculator (TI-30XS) Tutorial

CONTENTS

1. Introduction to the GED Calculator

1.1 When the Calculator will be available

The GED Calculator (TI-30XS) will be available *on-screen* for most items for the **2014 Mathematical Reasoning** test, and some of the items on the **2014 Science** and **Social Studies** tests.

1.2 How to access and move the Calculator on-screen

The Calculator is *built into* the GED test software on the computer. You cannot use a hand-held version.

You can access it during the test by clicking on 'Calculator' in the top left-hand side of the test.

This will open the GED Calculator window, within the test window.
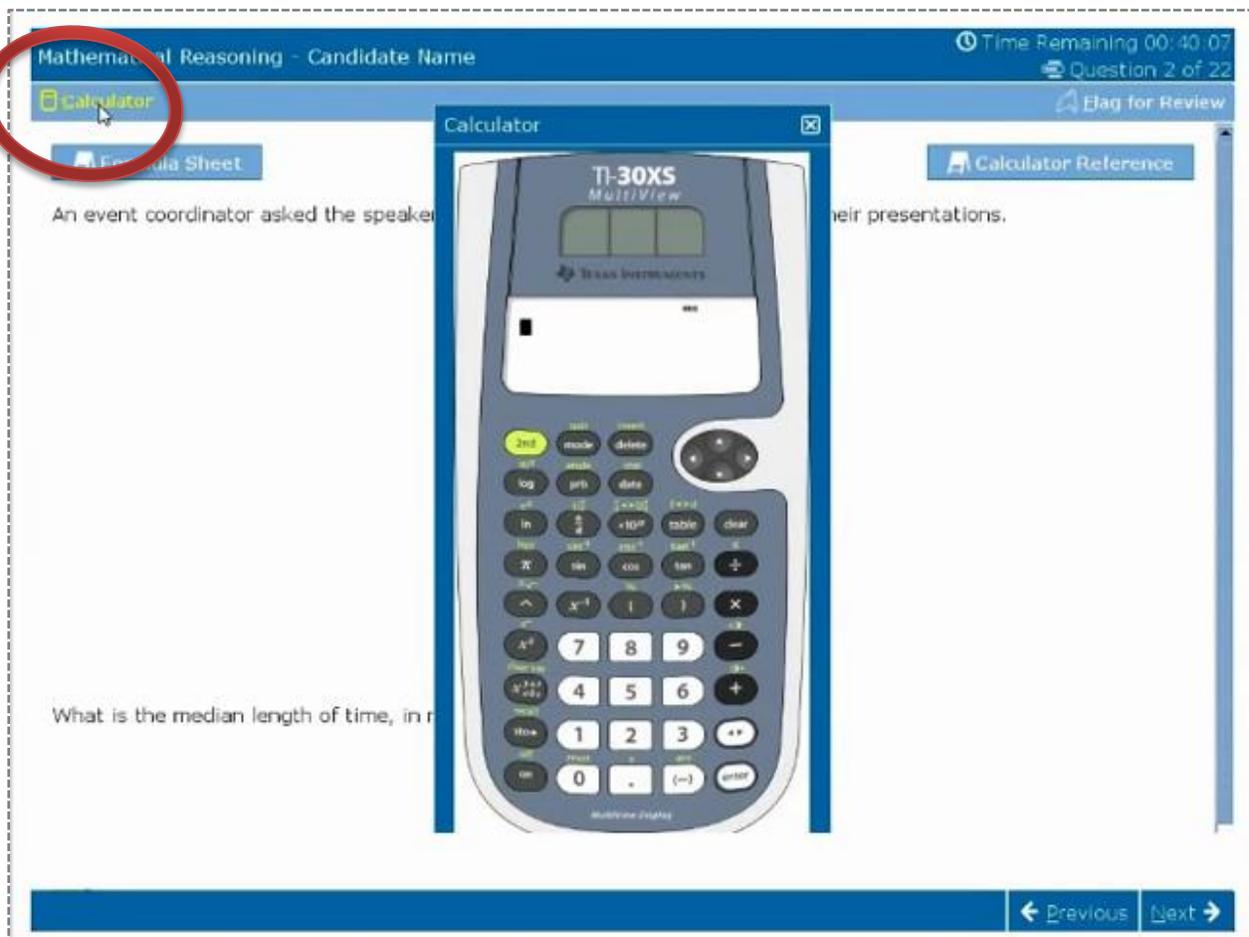
You can move the calculator around within the test window, by clicking and dragging the top bar of the Calculator window, see next page.
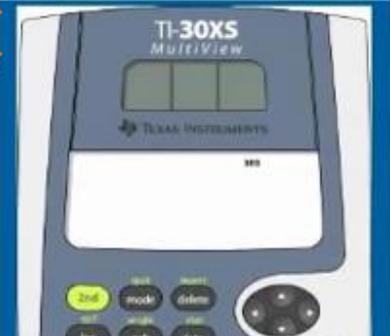
Calculator

Flag for Review

Formula Sheet

Calculator

TI-30XS
MultiView

An event coordinator asked the speakers to provide the length, in minutes, of t

Length of Speakers' Presentations

Speaker	Length of Presentation (minutes)
1	32
2	20

You close it again by clicking on the 'x' in the top right-hand corner of the Calculator window.

1.3 The Main Keys
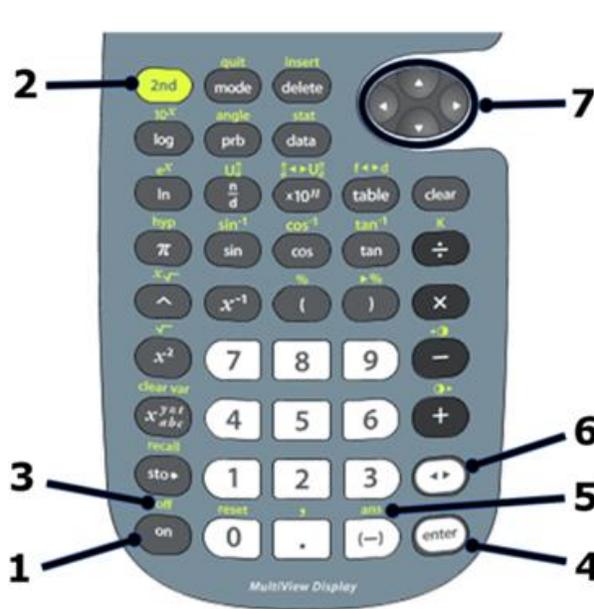
1 **on** turns on the calculator.

2 **2nd** turns on the 2nd indicator and accesses the function shown above the next key you press.

3 **2nd** **on** turns off the calculator and clears the display.

4 **enter** completes the operation or executes the command.

5 **2nd** **(−)** recalls the most recently calculated result and displays it as Ans.

6 toggles the answer between fraction and decimal, exact square root and decimal, and exact pi and decimals formats.

7 allows you to move the cursor on the screen and in operations as necessary.
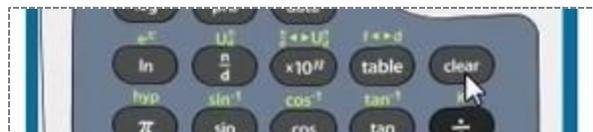
The **clear** key is used to clear the display after you have completed the desired calculations.

1.4 Calculator Reference Sheet

It is possible to open the Calculator Reference sheet whenever you have access to the calculator. Do this by clicking on the Calculator Reference button in the upper right-hand corner of the screen during the test.
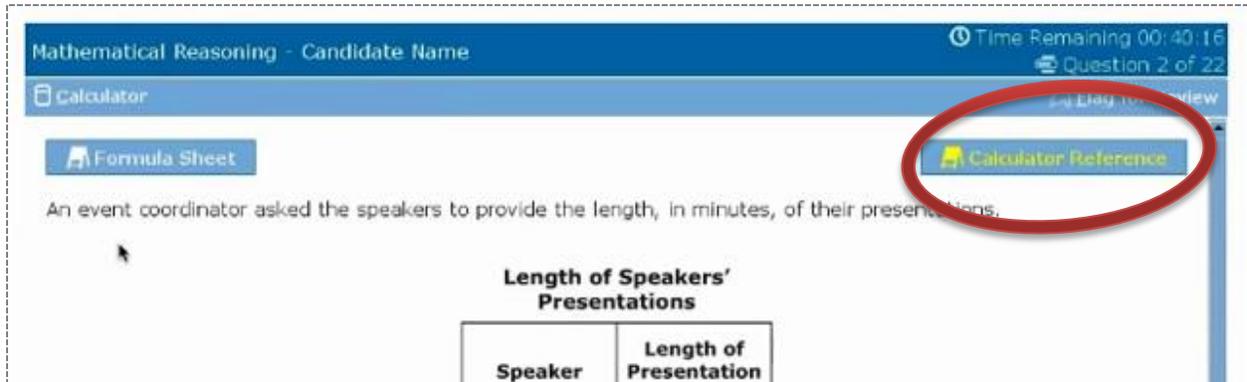
The Calculator Reference sheet explains the basic operations, and can be referred to when you are confused about how to complete certain operations on the calculator.

2. Standard Operations

2.1 Addition, Subtraction, Multiply, and Divide

This is how to calculate five plus four. (5 + 4 =)
The screen will display the answer '9' once the **enter** key is pressed.

This is how to calculate seven minus four. (7 - 4 =)
The screen will display '3' once the **enter** key is pressed.

This is how to calculate two times four. (2 x 4 =)
The screen will display '8' once the **enter** key is pressed.

This is how to calculate six divided by two. (6 / 2 =)
The screen will display '3' once the **enter** key is pressed.

Note: The **negative** key is not the same as the **subtract** key .

2.2 Powers and roots

To perform calculations with powers and roots, you will use the following keys:

This key is for the **square** function.

The second function of this key is for calculating **square roots.**

This key is for the **exponent** function (exponents over 2).

The second function of this key is for **roots over 2.**

EXAMPLE

$1.2^2 =$

| 1 | . | 2 | x^2 | enter |

The correct answer = **1.44**

EXAMPLE

$7^4 =$

| 7 | ^ | 4 | enter |

The correct answer = **2401**

EXAMPLE

$\sqrt{529} =$

| 2nd | x^2 | 5 | 2 | 9 | enter |

The correct answer = **23**

EXAMPLE

$\sqrt[3]{1728} =$

| 3 | 2nd | ^ | 1 | 7 | 2 | 8 | enter |

The correct answer = **12**

Note: The answer for **square roots** will be displayed as a whole number or a simplified root. The answer for **roots over 2** will be displayed as a whole number or a decimal.

Example:

What is the square root of 18?

$\sqrt{18}$ $3\sqrt{2}$

2.3 Fractions

When doing fractions you use the key.

Once you have pressed this key, you will be able to input the value of the *numerator*. You will then need to use the **down arrow** key to move from the numerator to the *denominator*. When you have completed the fraction, press the **right arrow** key to 'move out' of the fraction. Now you can use other functions as normal.

Note: The answer will be displayed in reduced form automatically.

2.4 Mixed Number Fractions

When performing calculations with mixed numbers, use the *second function* of the **fraction** key:

First input the whole number part of the mixed number, then the **2nd** and **fraction** keys. Then enter the numerator and denominator as normal, using the **down** and **right** arrow keys.

Note: Mixed numbers are converted to <u>improper fractions</u> when **enter** is pressed.

2.5 Scientific Notation

When performing calculations with numbers expressed in scientific notation, use the key.

First, enter the base number, then the **scientific notation** key, followed by the exponent. Finally, click the **right arrow** key to 'move out' of the scientific notation and continue with your calculation.

EXAMPLE

$$7.8 \times 10^8 - 1.5 \times 10^8 =$$

The correct answer = **630000000**

The answer will be displayed as a <u>whole number</u> or a <u>decimal</u>.

2.6 Percentages

Press the [2nd] [(] key to calculate with percentages.

EXAMPLE

$$40\% \times 560 =$$

The correct answer = **224**

To convert a decimal or a fraction to a percentage, press the [2nd] [)] key, followed by **enter**.

3. Other Useful Functions

3.1 Toggle Key

The answer toggle key [◄►] can be used to change how answers are displayed.

For example, if your answer is shown as a fraction, pressing the **toggle** key will convert the fraction to a decimal. If you answer is a square root, pressing the **toggle** key will convert it to a decimal.

EXAMPLE

$$\frac{9}{10} =$$

The correct answer = **0.9**

3.2 Fraction and Mixed Number Toggle Key

You can use the [2nd] [×10ⁿ] key to toggle between an answer displayed as a fraction or a mixed number.

For example, if your calculation results in an answer shown as an improper fraction, you can use the **fraction to mixed number** toggle key to convert it into a mixed number. Do this by pressing the **2ⁿᵈ** key, then the **scientific notation** key, and then press **enter** to display the mixed number.

This function can also be used to convert a mixed number into an improper fraction, in the same way.

3.3 Correction

If you accidentally press the wrong key, before you press **enter** you can use the **left arrow** key to go back and correct the error. The cursor (the flashing black square) will move left, highlighting a number or function you entered. When you reach the one with the error, press **clear** to erase it, and continue with your calculation.

For example; you accidentally press the **7** key instead of the **8** key. Before you press **enter** and compute the answer, press the **left arrow** key so that the flashing cursor is over the 7 on the screen, then press **clear**. This will erase the 7, so that you can enter the correct number. This works with functions as well as numbers.

3.4 The 'ans' (answer) Key

If you want to use the answer from one calculation in the next calculation, you use the **ans** function.

Do this by pressing the **2ⁿᵈ** and **negative** keys as you type in the calculation, and the answer to the previous calculation will be included in the computation.

For example; you do a calculation and the answer is 8.7523304. If, in your next calculation you want to use this number, instead of typing it out manually, you can simply press the **2ⁿᵈ** and **negative** keys and the word 'ans' will show up in the display signifying that the previous answer will be used in the following calculation.

Note: Do not **clear** the display between calculations if you intend to use the **ans** function. If you press the **clear** key after the first calculation, the answer will be cleared, and the **ans** function will not work.

4. Extra resources

4.1 Official Online Calculator Tutorial - http://www.gedtestingservice.com/ged_calc_en_web/

This is an interactive tutorial which will help you understand how the calculator will be accessed in the test.

4.2 "Introduction to the GED Calculator" video- https://www.youtube.com/watch?v=VoLZLsRXuKE

The official online training video for the TI-30xs GED Calculator. If you can't click on the link, find the video on YouTube by searching for "introduction to GED calculator video". (Spanish video also available)

4.3 GED Resource Page - http://www.gedtestingservice.com/educators/resources-educators

This page also provides links to the above two resources, and additionally includes more downloads and other free resources for helping you get your GED.

Now you can use the GED Scientific Calculator. Good luck in the tests!