What do you need to know about the TI-30XS calculator?

The math section of the GED is divided into two sections. You can not use a calculator for the first section, which is 5 questions. You can use a calculator for the second section (the rest of the test). In the section where the calculator is allowed, you won't need it for many of the questions. You can use a calculator for the Math, Science, and Social Studies sections of the GED.

It is important that you are comfortable with the calculator so that you can use it as a support in the calculator-allowed section of the test.

Some things test-takers should know about the calculator:

- Use 

instead of =.
- To erase screen: 

- Use the arrow keys to move the cursor.
  This includes moving up to previous calculations. 
- Basic arithmetic operations (multiplication, division, addition, subtraction).
- The *negative number* key and the *subtraction* key are two different keys:
  - Negative sign: 

  - Subtraction: 
- Use this key to convert from fraction to decimal and from decimal to fraction: 

Practice:

1. What fractions are equivalent to 0.875?

2. Which is greater, $\frac{11}{16}$ or 0.875?

3. What is -24 times 3?

4. What is -344 divided by 4?

5. The lowest temperature recorded in New York State is -52°F. The highest temperature recorded in New York State was 108°F. What is the difference between those two temperatures?

Fractions

To enter a fraction into the calculator, press  , then the numerator, then the down arrow  , then the denominator, then the right arrow  .

Practice:

6. $\frac{3}{4} + \frac{1}{8} =$
7. $\frac{2}{3} + \frac{1}{4} =$
8. $\frac{5}{4} - \frac{3}{8} =$
9. $\frac{5}{4} - \frac{4}{5} =$
10. $3 - \frac{7}{8} =$
11. $\frac{3}{4} \times \frac{1}{2} =$
12. $\frac{5}{6} \times \frac{3}{4} =$
13. $\frac{2}{3} \div \frac{1}{4} =$
14. $\frac{1}{2} \div \frac{1}{6} =$
15. $6 \div \frac{1}{4} =$

ADDING FRACTIONS TO MAKE A WHOLE NUMBER

Directions: Using the digits 1-9, fill in the blanks to make a whole number sum. Use each digit only at most one time. Can you make all whole numbers from 1 to 9?

16. $\frac{\square}{\square} + \frac{\square}{\square} = \square$

Exponents

To take a number to the 2nd power (squaring the number), use the x^2 key.

First press the number you want to square, then press  .

Example:

To find 13^2, press 13 and then  .

To raise numbers to other exponents (higher than the second power), first press the base number, then  and then the exponent.

Example:

To find 2^6, press 2, then  , then 6.

Practice:

17. 17^2 =

18. 7^4 =

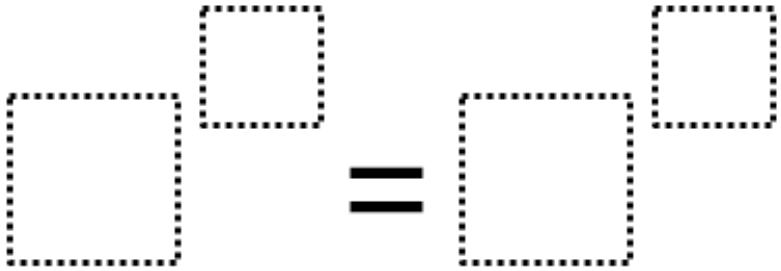
19. Which is bigger, 4^3 or 3^4?

20. Put these in order from least to greatest: 2^7 4^4 8^2

21. Which is greater, 6^5 or 5^6?

EQUIVALENT EXPONENTS

Directions: Using the digits 0-9 only once each, create as many true equations as possible.

22. 

On your calculator, you will notice that some buttons have words or symbols above them in green.

You can use these functions by pressing the 

button.

For example, to turn off calculator: Press 

, and then 

Roots

- Square roots: 

, 

, then the number you want to find the square root of.
- Cube roots: 

, 

, 
, then the number you want to take the cube root of.

Examples:

To find the square root of 144: 

, 

, 144

To find the cube root of 216: 

, 

, 
, 216

Note: Questions on the GED are limited to square roots ("to the 2nd power") and cube roots ("to the 3rd power").

Practice:

23. What is the square root of 961?

24. What number times itself equals 784?

25. What is the cube root of 1728?

Mark the next three statements True or False. If False, rewrite the statement to make it true:

26. The square root of 16 is 256.

27. The cube root of 9 is 3.

28. The cube root of 343 is larger than the square root of 49.

Useful, but not necessary:

- Creating in-out tables from functions (*y = 2x + 1*, for example):

  , 

  , 
  , 

  , 

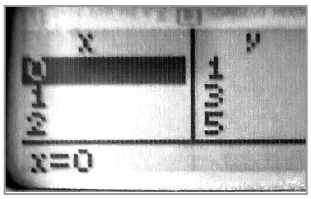
  , 

  , 

  , 

  , 

  , 

  What the function table screen will look like: 

- Holding on and hitting clear will empty memory: 

  , 

- Convert number to percent: 

  , 

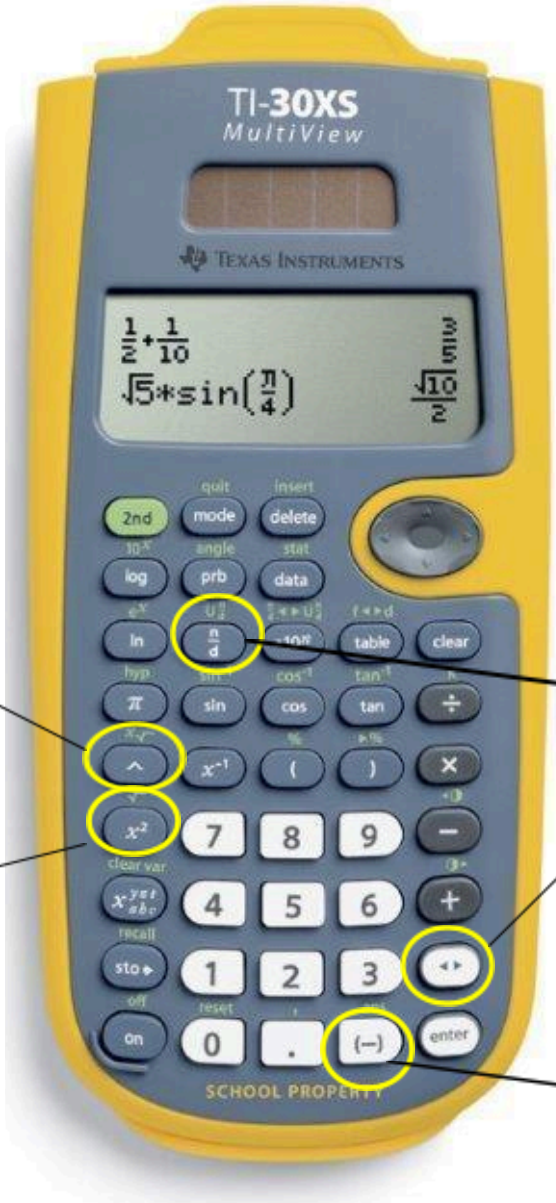
- Scientific notation: 

Things you <u>do not</u> need to know for the test:

- Trigonometry (sin, cos, tan)
- Logarithms
- Most of the other buttons

Additional Resources:

- Tutorial on using the computer-based TI-30XS on the GED exam: https://ged.com/practice-test/en/calculator/
- GED Math Formula & Calculator Reference Sheet



Raising a number to a power (& cube roots)

Squaring numbers (& finding the square roots)

Entering fractions

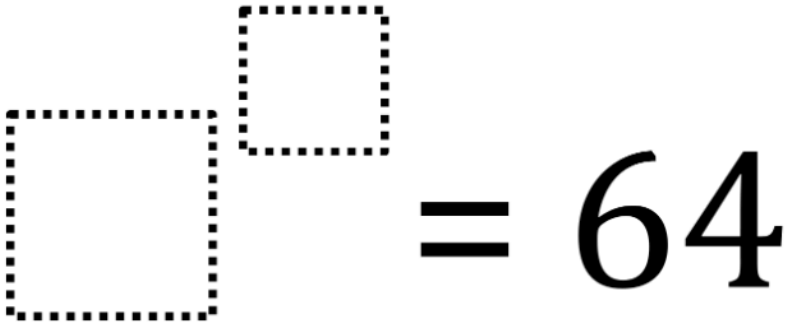
Converting between decimals and fractions

Negative numbers

More Practice

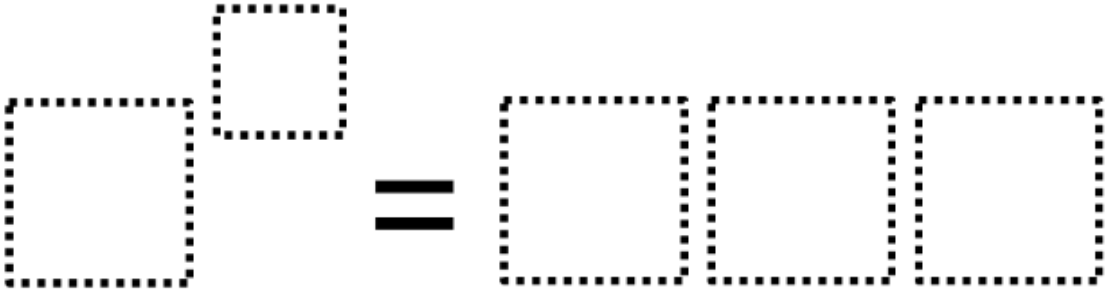
EXPONENT EXPLORATION

Directions: Using the digits 1 to 9, at most one time each, fill in the boxes to make two true number sentences.

29. 

EXPONENT (MAXIMUM VALUE)

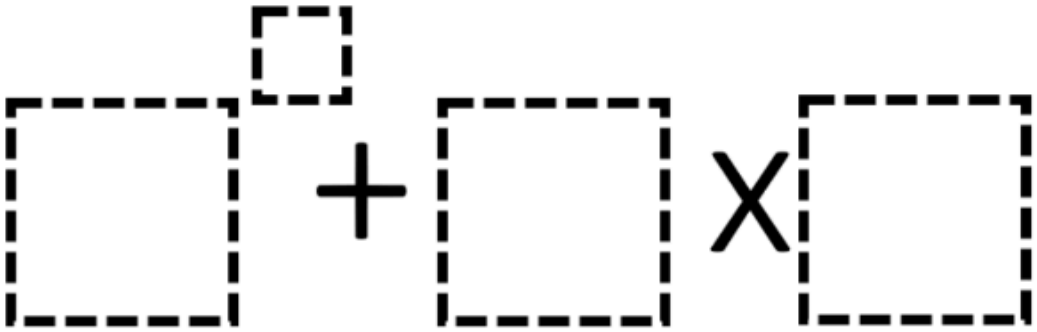
Directions: Using the digits 1 to 9, at most one time each, fill in the boxes to make a result that has the greatest value possible.

30. 

31.

ORDER OF OPERATIONS 6

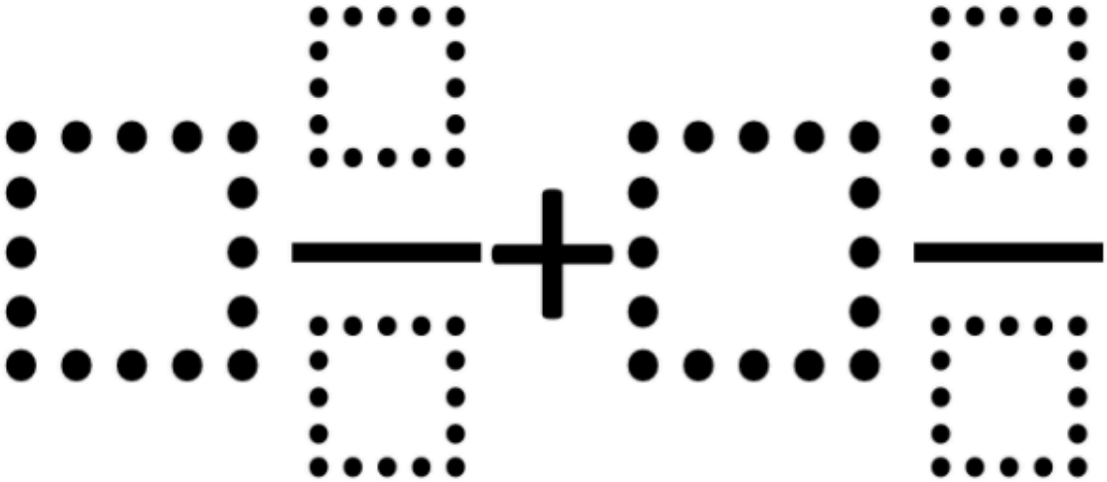
Directions: Using the digits 1 to 5, at most one time each, place a digit in each box to create an expression with the largest possible value.



32.

ADDING MIXED NUMBERS

Directions: Using the digits 1 to 9 at most one time each, fill in the boxes to make the largest sum.



Answer Key

1) 7/8 is the fraction that the calculator will give if you convert 0.875 to a decimal, but there are many other fractions that are equivalent to 0.875. For example:, 14/16, 21/24, 875/1000, ...

2) 0.875 (11/16 is equal to 0.6875)

3) -72

4) -86

5) 160

6) 7/8

7) 11/12

8) 7/8

9) 9/20

10) 2 1/8

11) 3/8

12) 5/8

13) 8/3

14) 3

15) 24

16) There are many possible solutions. Here is one: $\frac{2}{4} + \frac{3}{6} = 1$

17) 289

18) 2401

19) 3^4

20) 2^7 is equal to 128, 4^4 is equal to 256, and 8^2 is equal to 64. The order from least to greatest is: 8^2, 2^7, 4^4

21) 5^6

22) There are many possible solutions. Here is one: $3^4 = 9^2$

23) 31

24) 28

25) 12

26) T

27) F. The cube root of 9 is **approximately 2.08**. Or The cube root of **27** is approximately 3.

28) F. The cube root of 343 is **equal to** the square root of 49.

29) There are three solutions: 8^2, 4^3, 2^6

30) Here is one solution: $8^3 = 512$. Can you find a larger value?

31) Here is one solution: $2^3 + 5 \times 4 = 28$. Can you find a larger value?

32) Here is one solution: $1\frac{2}{3} + 4\frac{5}{6} = \frac{13}{2} = 6\frac{1}{2}$ Can you find a larger value?