



TI-30SX CALCULATOR TRAINING

CENTRAL / SOUTHERN TIER RAEN

JANUARY 2014

LINDA S. NESTOR

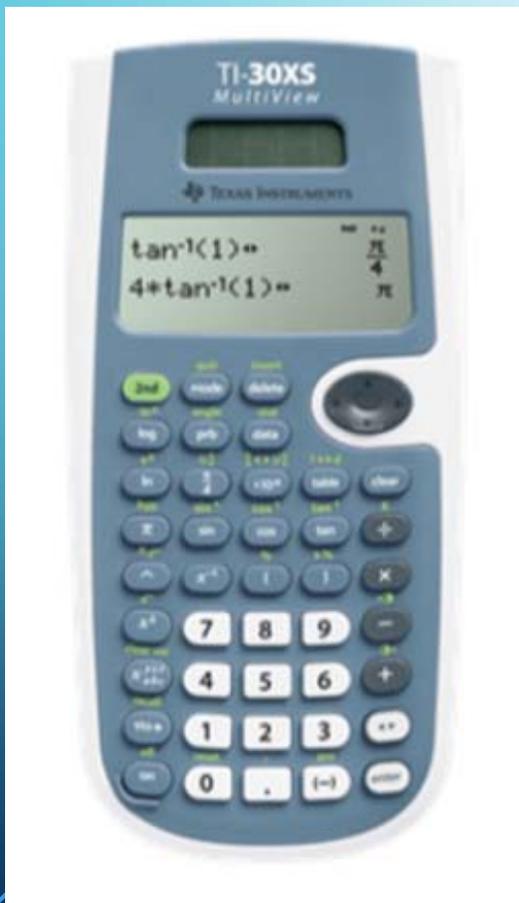
INSTRUCTIONAL TECHNOLOGIST



Solar Powered



TEXAS INSTRUMENTS TI-30XS CALCULATOR



Key features

- > Four-line display
- > One- and two-variable statistics
- > MathPrint™ feature
- > Fraction/decimal conversion
- > Step-by-step fraction simplification
- > Edit, cut and paste entries
- > Solar and battery powered

This calculator is accepted for use during the Test of Assessing Secondary Completion exam

Texas Instruments TI - 30XS Calculator

154 page Teacher's guide is available for download at:

http://education.ti.com/en/us/guidebook/details/en/62522EB25D284112819FDB8A46F90740/30x_mv_tg

TEXAS INSTRUMENTS TI - 30XS CALCULATOR

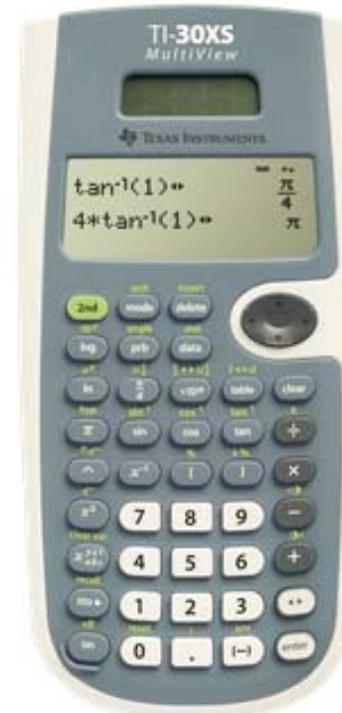
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TEXAS INSTRUMENTS TI - 30XS CALCULATOR

Button Over view

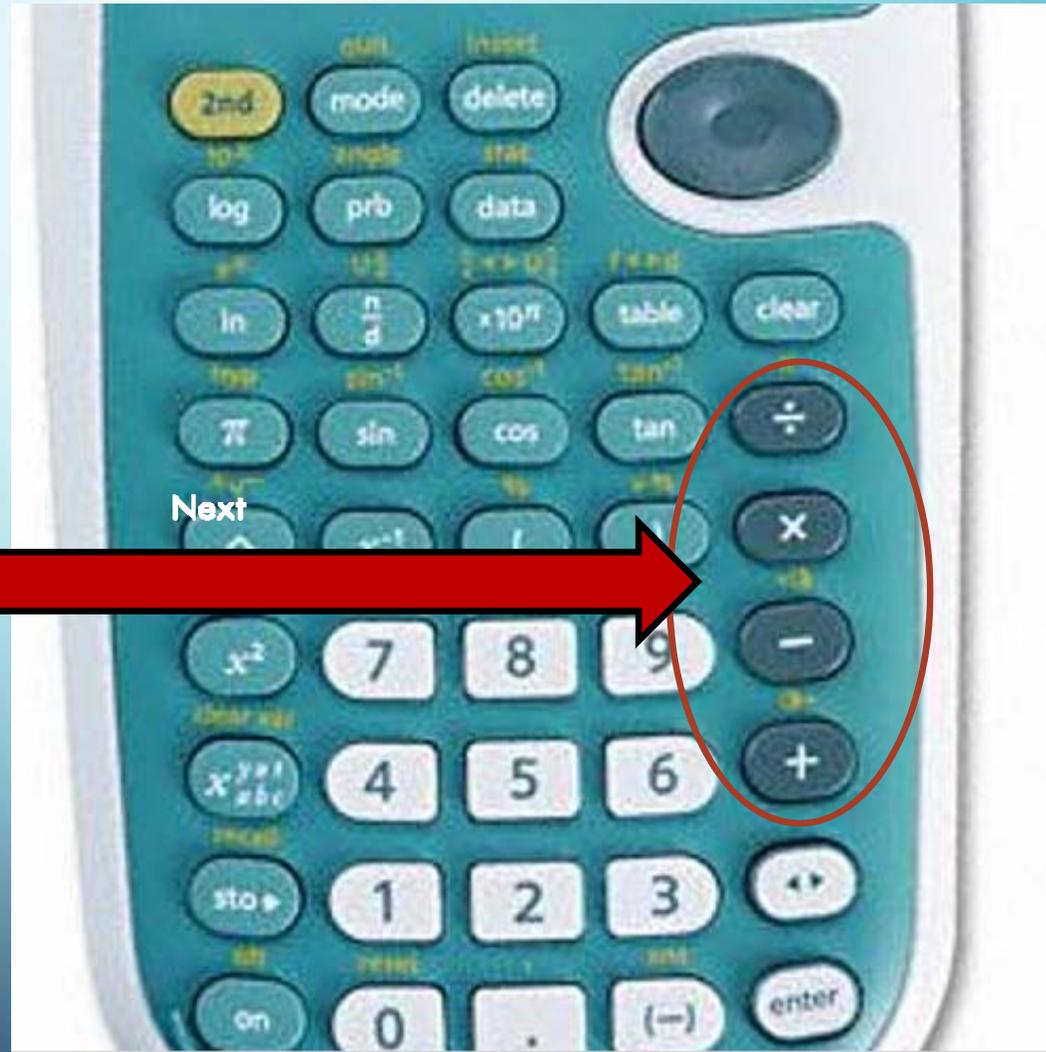
- On /Off button - lower left
- APD – automatic power down
- Scrolling wheel – upper right
- Function keys – grey keys
- Operations keys – black keys
- Number keys – white keys
- 2nd functions – green key



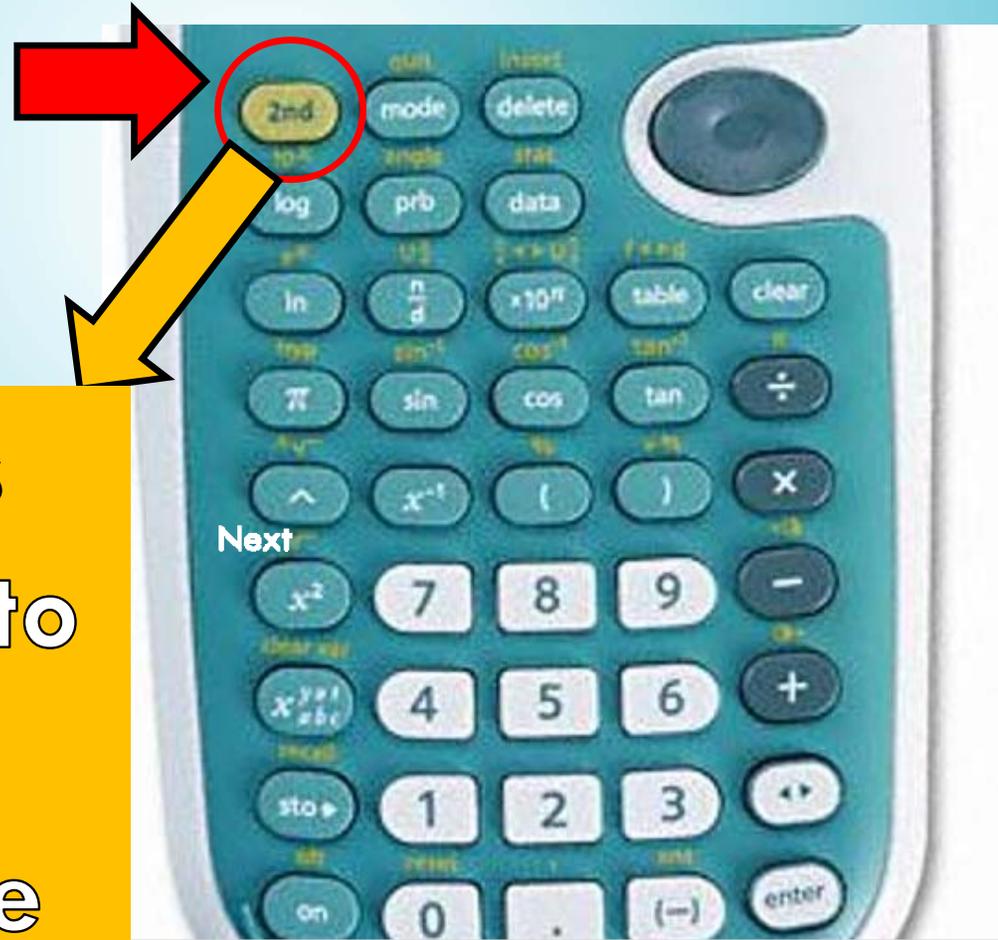


White keys

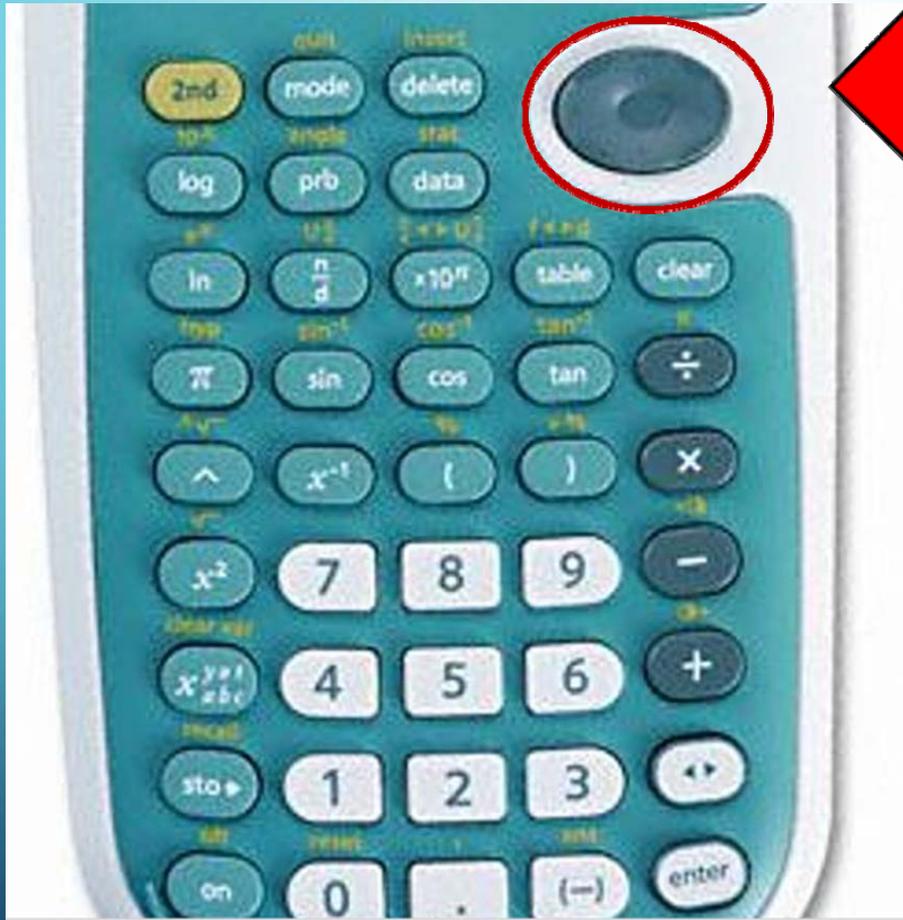
Operations keys



Change
mode key



2nd Functions
Press this key to
change the
function of the
blue grey keys



Scroll wheel

The scroll wheel allows for movement within the equations on the screen, much as a mouse allows movement on a computer screen

Getting Started with the TI-30XS

Reset the calculators. This ensures that everyone starts in the same place.

1. Press **2nd** and then [reset]- (reset is the 0 key)

2. Select 2 (for yes).

3. Try something simple:

$$1369 \times 852 =$$

$$9873 - 987 =$$

$$753 \div 159 =$$

Getting Started with the TI-30XS

Did you get the right answers?

$$1369 \times 852 = 1,166,388$$

$$9873 - 987 = 8,866$$

$$753 \div 159 = 4.735849057$$

Once successful with the simple stuff,

try some calculator games to get used to using the machine.

<http://www.dr-mikes-math-games-for-kids.com/calculator-games.html>

NOW TRY THIS ONE

- Make sure that the calculator is on – It has an automatic power down program.
- Pick a number between 1 and 9.
- Type that number into the calculator
- Multiply it by 9, and
- then multiply it by 12,345,679.

Be careful!
Do not fall for
the inattention trick!

The answer is Easy.

If you selected 5, the final answer is 555,555,555.

OR

If you selected 3, the final answer is 333,333,333.

The reason:

$$9 \times 12345679 = 111111111.$$

You multiplied your digit by 111111111.

Did you notice the trick?

Clear your display and reset the calculator (2nd and reset)

Star Voyage Practice



The full practice is in the teacher's manual. Texas Instruments provides a free download at:

http://education.ti.com/en/us/guidebook/details/en/62522EB25D284112819FDB8A46F90740/30x_mv_tg

Star Voyage — Scientific Notation

Overview

Students investigate scientific notation by changing numbers into scientific notation, and then using them in calculations.

Math Concepts

- scientific notation
- addition
- division

Materials

- TI-30XS MultiView™
- pencil
- student activity worksheet

2. Have students change the following numbers into scientific notation (SCI) using the TI-30XS MultiView scientific calculator.

a. 12 000 000 1.2×10^7

b. 974 000 000 9.74×10^8

c. 0.0000034 3.4×10^{-6}

d. 0.000000004 4×10^{-9}

 Follow these steps:

1. Enter the first number, 12000000.
2. Press **mode**.
3. Press **↓** **→** **enter** **clear** **enter** to display the number in scientific notation.

$$1.2 \times 10^7$$

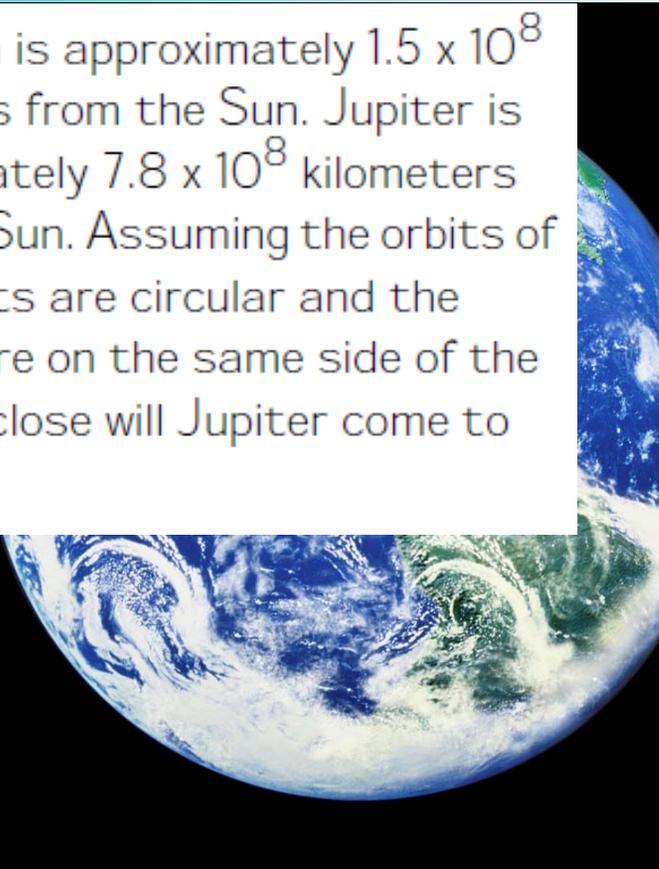
To try the next problem is simpler:
Follow these steps:

1. Enter the number, 974 000 000.
2. Press **enter** to display the number in scientific notation.

SCIENTIFIC NOTATION

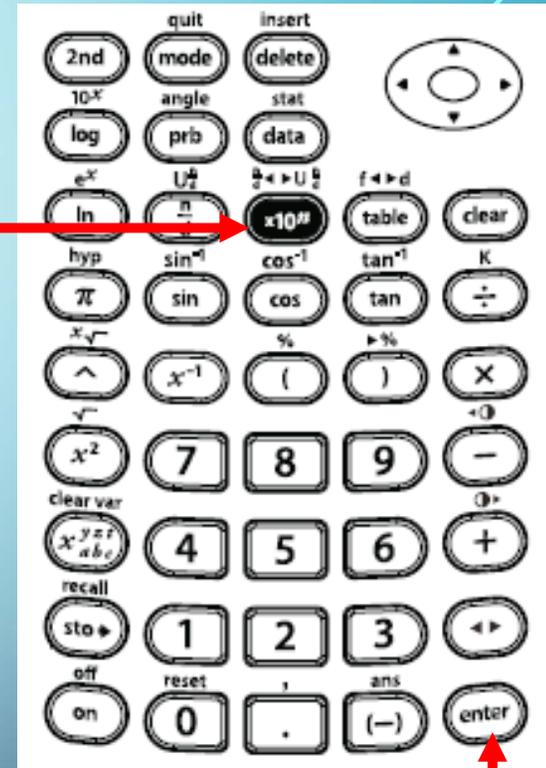
Try working the number format in the other direction
Clear your memory with 2nd and reset

The Earth is approximately 1.5×10^8 kilometers from the Sun. Jupiter is approximately 7.8×10^8 kilometers from the Sun. Assuming the orbits of the planets are circular and the planets are on the same side of the sun, how close will Jupiter come to Earth?



Press	Display
7 . 8	
$\times 10^n$ 8	
- 1 . 5 $\times 10^n$	
8 enter	$7.8 \times 10^8 - 1.5 \times 10^8$ 630000000

Jupiter and Earth could be approximately
 $630,000,000 = 6.3 \times 10^8$
kilometers apart.



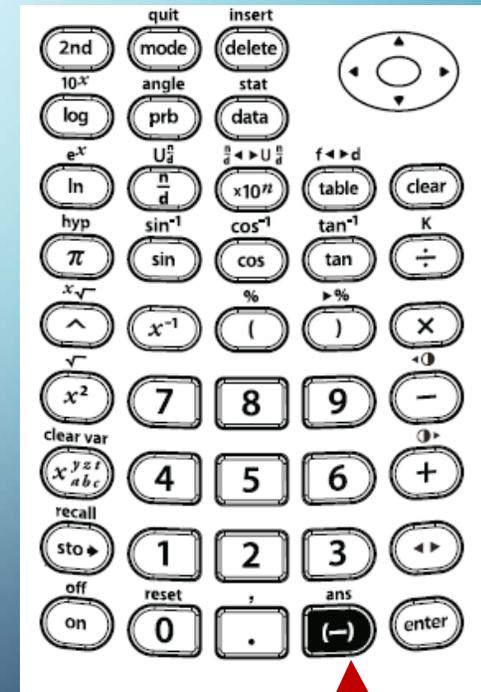
USING NEGATIVE NUMBERS

Clear your memory with 2nd and reset. Then click on 2 for yes.

The temperature in Utah was -3°C at 6:00 a.m. By 10:00 a.m. the temperature had risen 12°C . What was the temperature at 10:00 a.m.?

Press	Display
$(-)$ 3 $+$	$-3+12$ DEG $+$ 9
12 enter	

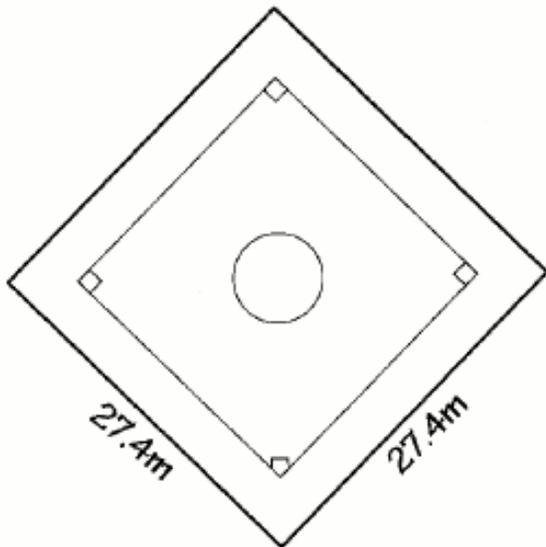
The temperature at 10:00 a.m. was 9°C .



SQUARES AND SQUARE ROOTS

Use this formula to find the size of the tarpaulin needed to cover the entire baseball infield.

$$A = x^2 = 27.4^2 \text{ square meters}$$

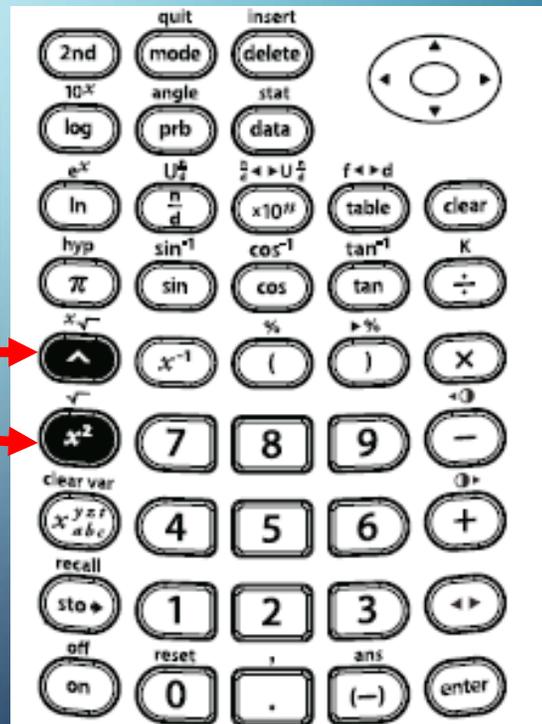


Press	Display
27 . 4	27.4 ² 750.76
x^2 enter	

or

27 . 4 \wedge 2	27.4 ² 750.76
enter	

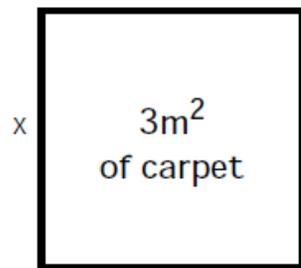
The area of the tarpaulin is 750.76 square meters.



SQUARES AND SQUARE ROOTS

Use this formula to find the length of the side of a square clubhouse if 3m^2 of carpet would cover the floor. Round your answer to 0 decimal places.

$$L = \sqrt{x} = \sqrt{3} \text{ meters}$$



Press Display

2nd [√] 3 enter

mode

enter

clear enter

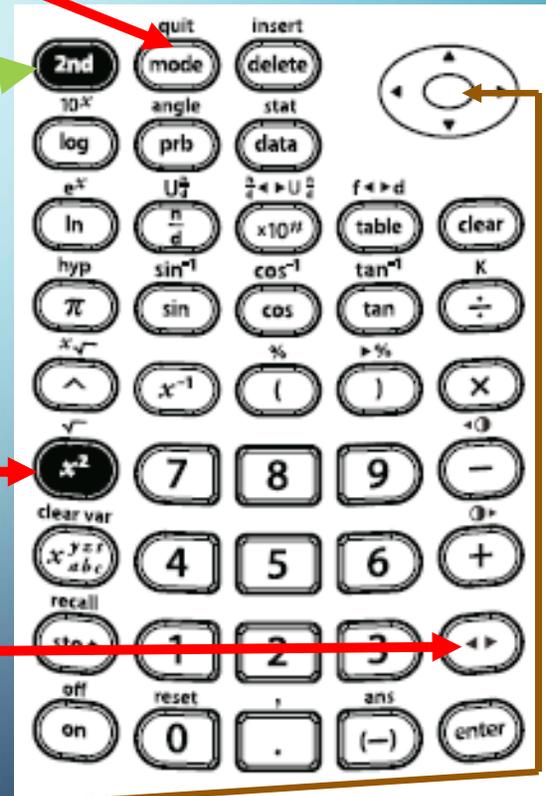
Display

$\sqrt{3}$

$\sqrt{3}$ 1.732050808

$\sqrt{3}$ 1.732050808

2

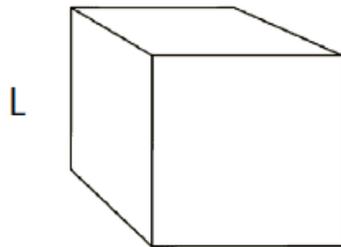


The length of a side of the square clubhouse is 2 meters rounded to 0 decimal places.

SQUARES AND SQUARE ROOTS

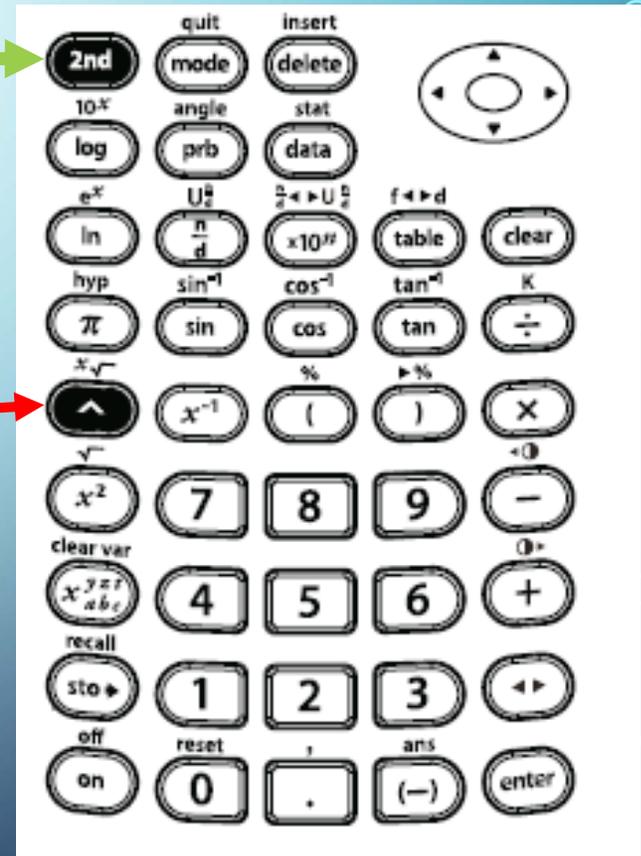
If the volume of a cube is 125 cm^3 ,
what is the length of each side?

$$L = \sqrt[3]{125} \text{ cm}$$



Press	Display
3 2nd [$\sqrt[3]{}$]	$\sqrt[3]{125}$ 5
125 enter	

The length of each side is 5 cm.



RESOURCES TO HELP STUDENTS PRACTICE

The Guide for Teachers from Texas Instruments is an excellent resource to help teachers get started

Video Resources:

- 1. A tutorial series by Christopher Bolden & Matthew Lenz <http://www.atomiclearning.com/ti30xs>
- 2. How to Use the TI-30XS Part 1- http://www.youtube.com/watch?v=SJ_TwTvoEd4
- 3. Khan Academy - <https://www.khanacademy.org/>
- 4. Math.com - <http://www.math.com/>

RESOURCES TO HELP STUDENTS PRACTICE

Books:

1. McGraw-Hill Education TASC (The Official Guide) ISBN-13: 978-0071823869
2. Kaplan New TASC® Strategies, Practice, and Review 2014 with 2 Practice Tests: Book + Online ISBN-13: 978-161865765

TASC TEST ASSESSING SECONDARY COMPLETION

- Sample Math Questions:

[http://www.ctbassessments.com/pdfs/
TASC_MathSampleTestItems.pdf](http://www.ctbassessments.com/pdfs/TASC_MathSampleTestItems.pdf)



Thank You
for
Joining us for
TI-30XS Training