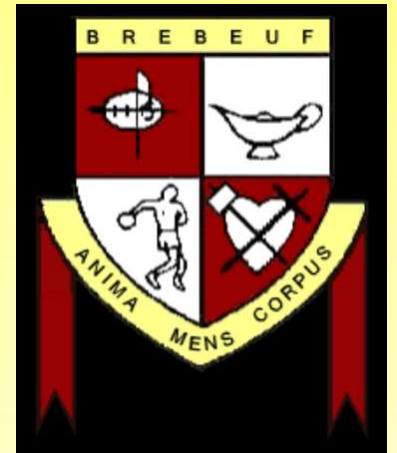


# ST. JEAN DE BREBEUF MATHEMATICS

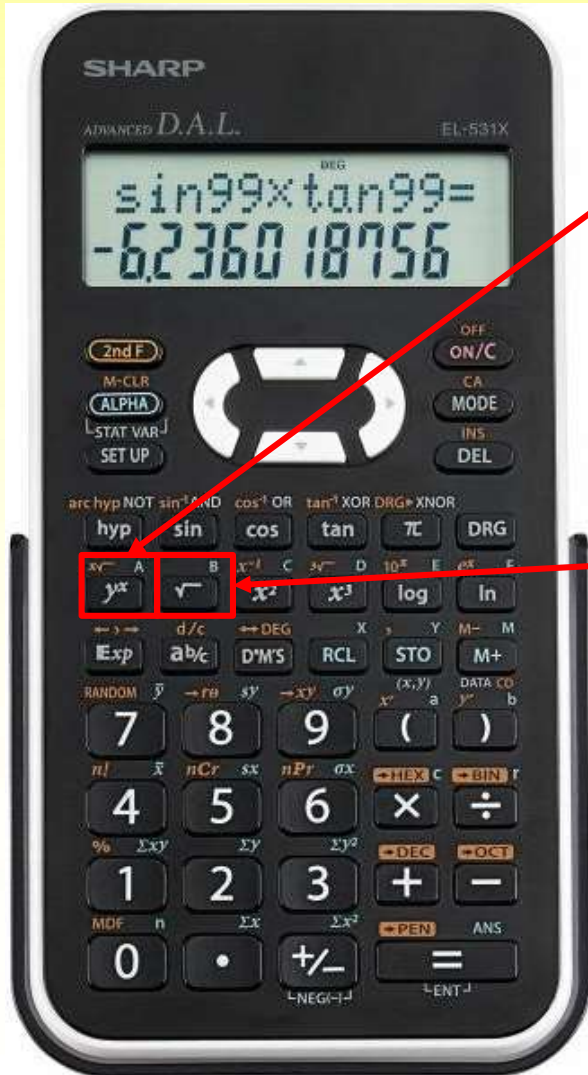


# INTRODUCTION

# GET READY!!!

# INTRODUCTION GET READY!!!!

## GETTING TO KNOW YOUR CALCULATOR!



### EXPONENT KEY

→ Used to evaluate questions with exponents

EXAMPLE: Evaluate  $2^4$

Press "2" →  $y^x$  → 4 → "="

### SQUARE ROOT

→ Used to calculate the square root of a number

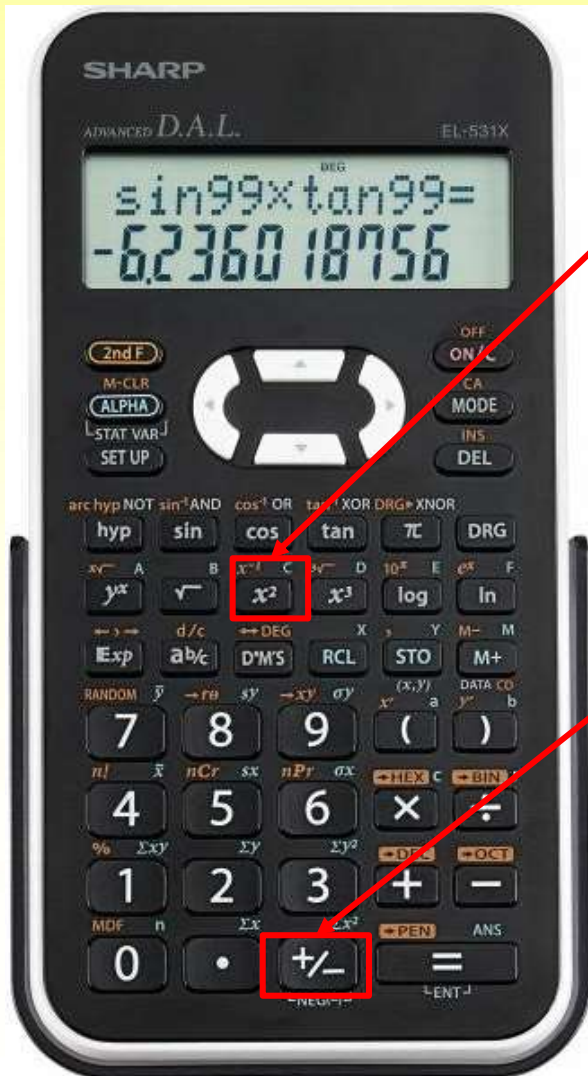
EXAMPLE: Evaluate  $\sqrt{25}$

Press " $\sqrt{\quad}$ " → 25 → "="

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## GETTING TO KNOW YOUR CALCULATOR!



### **SQUARE KEY**

→ Used to square each number / raise a number by exponent 2

*EXAMPLE:* Evaluate  $3^2$

Press “3” →  $x^2$  → “=”

### **INTEGER KEY**

→ Used to change a positive number to a negative integer

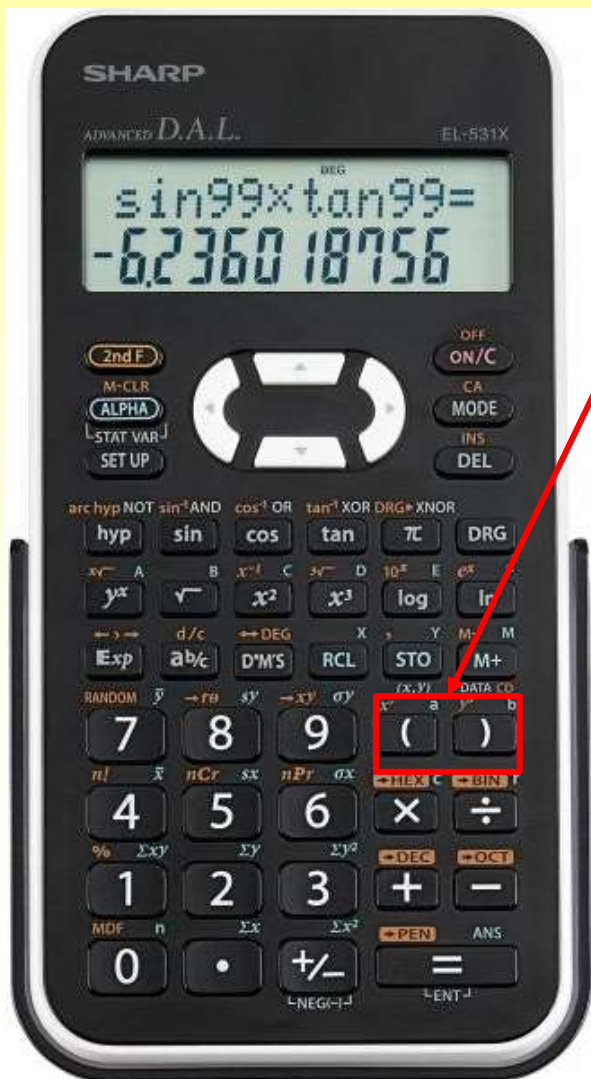
*EXAMPLE:*  $-3$

Press “+ / -” → 3



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**GETTING TO KNOW YOUR CALCULATOR!**



## **BRACKETS**

→ Used to put brackets around numbers  
(comes in handy when using *BEDMAS*)

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**EXAMPLE** Solving for 'x'

(a)  $x + 1 = 5$   
 $x = 5 - 1$   
 $x = 4$

(b)  $2x = 18$   
 $x = 9$

(c)  $x^2 = 25$   
 $\sqrt{x^2} = \sqrt{25}$   
 $x = 5$

Divide both sides by the coefficient!

Take the square root of both sides!

(d)  $x^2 - 5 = 11$   
 $x^2 = 11 + 5$   
 $x^2 = 16$   
 $\sqrt{x^2} = \sqrt{16}$   
 $x = 4$

# INTRODUCTION GET READY!!!!

## EXAMPLE *Pythagorean Theorem*

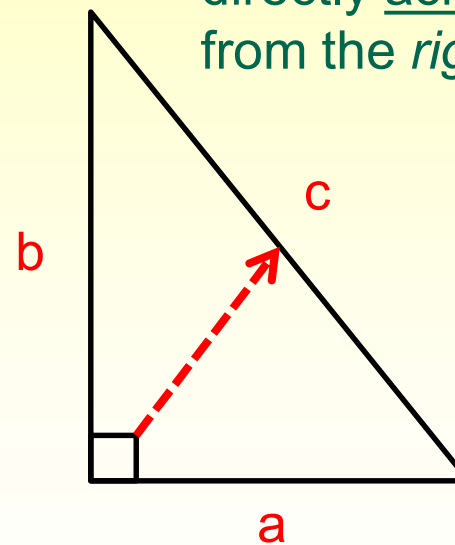
The Pythagorean Theorem is a formula used to solve for the length of any side in a right angle triangle

### FORMULA

$$c^2 = a^2 + b^2$$

where 'c' represents the *hypotenuse*

The *hypotenuse* is always the side directly across from the *right angle*

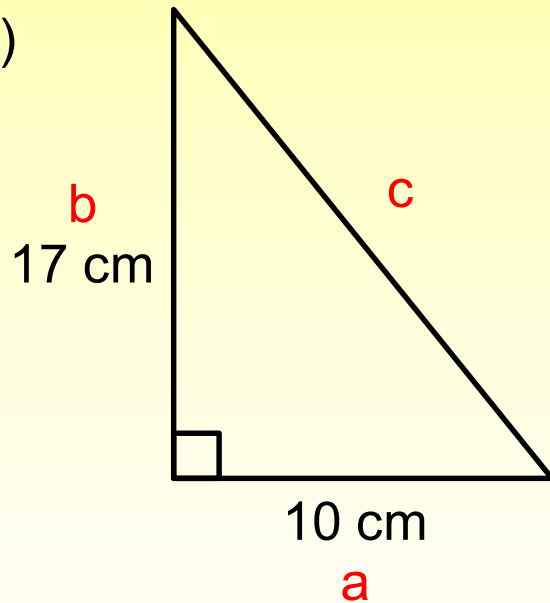


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## EXAMPLE *Pythagorean Theorem*

Solve for the length of the unknown side. Use the formula  $c^2 = a^2 + b^2$

(a)



$$c^2 = a^2 + b^2$$

$$c^2 = (10)^2 + (17)^2$$

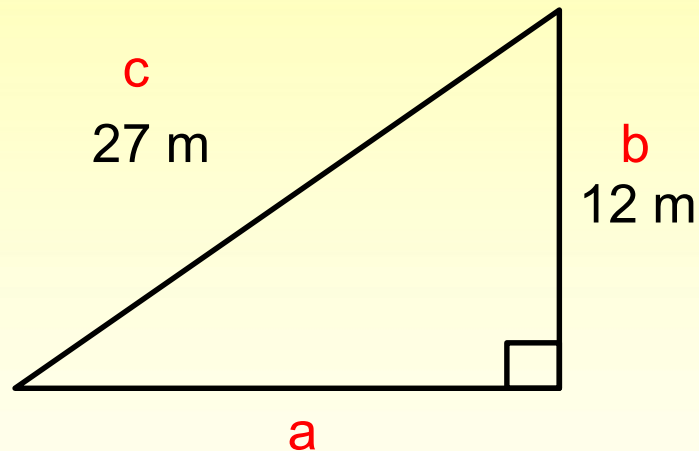
$$c^2 = 100 + 289$$

$$c^2 = 389$$

$$\sqrt{c^2} = \sqrt{389}$$

$$c = 19.7 \text{ cm}$$

(b)



$$c^2 = a^2 + b^2$$

$$(27)^2 = a^2 + (12)^2$$

$$729 = a^2 + 144$$

$$729 - 144 = a^2$$

$$585 = a^2$$

$$\sqrt{585} = \sqrt{a^2}$$

$$24.2 \text{ m} = a$$

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## EXAMPLE Solving Proportions

Solve for 'x'

(a)  $\frac{x}{5} = \frac{12}{3}$

\* Cross-multiply

$$\frac{3x}{3} = \frac{60}{3}$$

\* Divide both sides by the coefficient

$$x = 20$$

(b)  $\frac{-2}{10} = \frac{3}{x}$

$$\frac{-2x}{-2} = \frac{30}{-2}$$

$$x = -15$$



**INTRODUCTION GET READY!!!!**

# ***HOMework***

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