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The “U” in UMathX is ... “UNDERSTANDING”



RUDY NEUFELD - AUTHOR



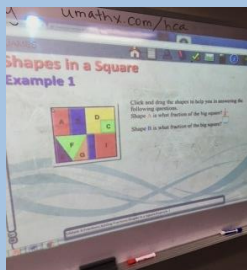
PERRI HUGGINS DIRECTOR



SAPHI – CLASS 4



DARREN PEI ADVISOR



HCA/James..Baton Rouge

## TIMES: Tuesday May 22

- 7 am CDT – Baton Rouge / Houston / Chicago
- 8 am EDT – Dominican Republic / NY / Windsor
- 9 am Atlantic Time – Charlottetown
- 3 pm E Africa Time – Tanzania

## REGISTERED ATTENDEES:

**Obrien School, Kilimanjaro** – Kari, Perri, Anna, Saphi, Fadhili, Haji & students  
**EDT zone** – Windsor/Andrew; NY/Maria; Santo Domingo/Jose  
**CDT zone** – HCA Baton Rouge/James, Mills; Houston/Abe; Chicago/Obrien;  
**Atlantic zone** – Charlottetown/Darren

## Instructions before the session

- \*If you have not registered please email [info@umathx.com](mailto:info@umathx.com) 24 hours before session.
- \*Registered attendees will be invited to the webinar by email at the begin time.
- \*Please **copy pages 3 & 4** and record on paper as you work through pages 3 & 4.

## Review the LEARNING ENVIRONMENT



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## The “U” in UMathX is ... “UNDERSTANDING”

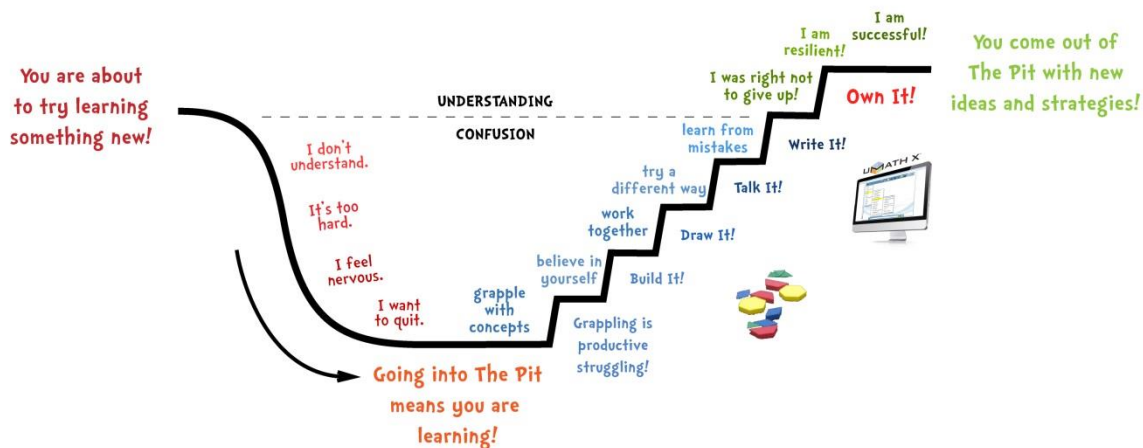
**Build it,  
Draw it,  
Talk it,  
Write it  
OWN IT!!**

- On your own time, play the video: *UMathX–What is it?* at [www.umathx.com](http://www.umathx.com) > Media > Videos
- UMathX transforms a “Valley of Despair” into productive struggling in a “learning pit”.



### The Learning Pit

A Model for a Growth Mindset



- On your own time, play the video <http://www.jamesnottingham.co.uk/learning-pit> .

**Webinar Attendees**, if possible, photocopy pages 3 and 4.  
Then work through and record on pages 3 and 4 before our webinar session.

## BEGIN THE LESSON

*For these lessons, you will need a computer with internet access as well as paper, pencil and appropriate manipulatives (algebra tiles)*

UNTIL JUNE 15, 2018

**On your computer ...**

**Enter the URL [www.umathx.com/preview](http://www.umathx.com/preview) into the address box of any browser.**

Enter the **Generic Username: count**  
Enter the **Generic Password: umathx**

# Concept 1: Algebraic Thinking – Concrete to Abstract

## ● STEP 1 ... GETTING STARTED

Login to [www.umathx.com/preview](http://www.umathx.com/preview) or your own URL, your own login and password..OR  
UNTIL JUNE 15, 2018.. Login is count

Password is umathx

On Computer, Login to **UMathX – Content Menu.**







Follow the path below:

Algebra > Algebraic Thinking > Pictures to Words Whole Numbers > Pictures to Words

Complete the chart below with pencil on paper as you work through the exercise in UMathX.

1. Learning takes place from **Concrete to Abstract**

2. The table is **KEY** to **UNDERSTANDING** ... unknown is            .. X tile







Picture	Command	Examples
	• Pick any number between 10 and 200.	<input style="width: 40px; height: 40px;" type="text"/>
	• Add 6 to it.	<input style="width: 40px; height: 40px;" type="text"/>
	• Multiply by 2.	<input style="width: 40px; height: 40px;" type="text"/>
	• Subtract 8.	<input style="width: 40px; height: 40px;" type="text"/>
	• Divide by 2.	<input style="width: 40px; height: 40px;" type="text"/>
	• Subtract the number that you started with.	<input style="width: 40px; height: 40px;" type="text"/>

On Computer, Login to **UMathX – Content Menu.**

Follow the path below:

Algebra > Algebraic Thinking > Pictures to Words Whole Numbers > MORE Pictures to Words

Complete the chart below with pencil on paper as you work through the exercise in UMathX.

Picture	Command	Examples
	• Pick any number between 10 and 100.	<input style="width: 40px; height: 40px;" type="text"/>
	• Multiply by 2.	<input style="width: 40px; height: 40px;" type="text"/>
	• Add 6.	<input style="width: 40px; height: 40px;" type="text"/>
	• Add the number that you started with.	<input style="width: 40px; height: 40px;" type="text"/>
	• Divide by 3.	<input style="width: 40px; height: 40px;" type="text"/>
	• Subtract 2.	<input style="width: 40px; height: 40px;" type="text"/>

TALK ABOUT IT!! ... Construct Your Understanding ... WRITE ABOUT IT

## ● STEP 2a .. WORKING AT IT – Introduce Tiles

On Computer, Login to [UMathX – Content Menu](#).

Follow the path below:

[Algebra > Tiles and Algebra > Area](#)

**Work through:**

**Area ... The Concept, Example 1, Example 2, Example 3**

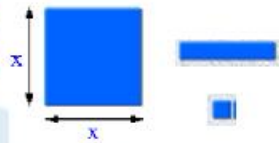
On Computer, Login to [UMathX – Content Menu](#).

Follow the path below:

[Algebra > Tiles and Algebra > Introduction to Tiles](#)

**Work through:**

**Tile Representation, Like Terms, Combinations, Squared Terms**



### CONSTRUCT UNDERSTANDING

**Use Real ALGEBRA TILES .. Draw them on PAPER .. Represent on COMPUTER.**

## ● STEP 2b .. WORKING AT IT -- Tiles to Help in Algebra

On Computer, Login to [UMathX – Content Menu](#).

Follow the path below:

[Algebra > Tiles and Algebra > PICTURES to WORDS to ALGEBRAIC EXPRESSIONS > Ex 1](#)

Complete the chart below, pencil on paper as you work through Exercise 1 in UMathX

<u>Picture</u>	<u>Words</u>	<u>Algebraic Expression</u>
	• Pick any number	
	• Add 6 to it.	
	• Double the answer.	
	• Subtract 8.	
	• Divide by 2.	
	• Subtract the original number.	
This answer will always be .....		

## ● STEP 3 .. REFLECT & CONECT

Go to [www.UMathX.com](http://www.UMathX.com) and select “**supportsheets**” under “**Resources**”

Under “**Algebra**” select the Support Sheet, “**Algebra Section 2**” – Tiles and Algebra

In your notebook with pencil and paper, complete pages 1,2,3,4

# Concept 2: Place Value – Concrete to Abstract

Login to [www.umathx.com/preview](http://www.umathx.com/preview) or your own URL, your own login and password..OR  
 Until June 15 .. login is count  
 Password is umathx

Select the framework below ... select "View a Framework"

## Framework for Learning:

Leader's Name: .....

## Place Value - Ones & Groups of Tens

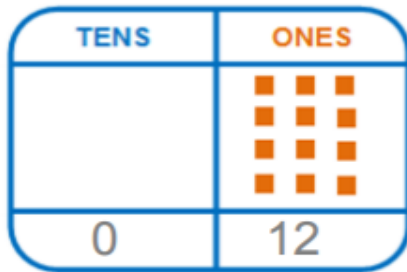
Co-Leader's Name: .....

Instructor's Initials: .....

### Getting Started:

In **UMATH X** follow the path:

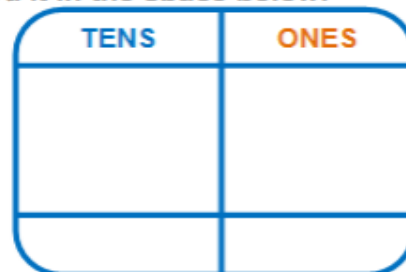
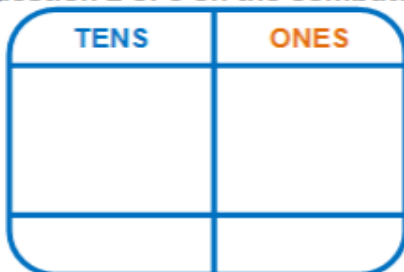
Place Value > 2. Model Numbers Grouped in Packages > C > 1.) Ones and Groups of Ten  
 Complete question 1 of 6 on the computer and record it in the space below.



We began with \_\_\_\_\_ ONES.

Now there is \_\_\_\_\_ TEN and \_\_\_\_\_ ONES.

Complete question 2 of 6 on the computer and record it in the space below.



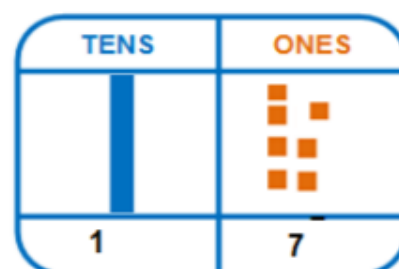
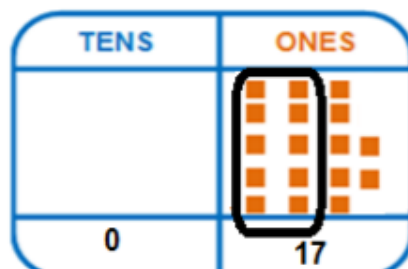
We began with \_\_\_\_\_ ONES.

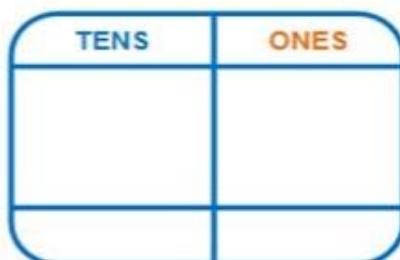
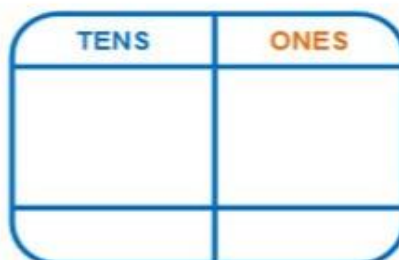
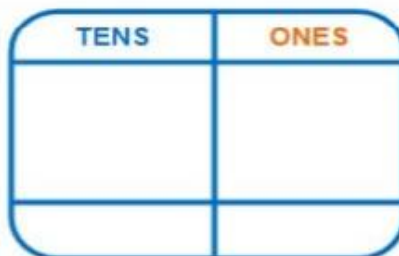
Now there is \_\_\_\_\_ TEN and \_\_\_\_\_ ONES.

Complete questions 3 to 6 of 6 on the computer.

**Working In It:** In examples below, circle groups often. Draw the regrouped number to the right.

This first one has been done for you.





## Reflect & Connect:

Compare your answers in *Getting Started* and *Working In It*.

**Talk** with a partner about any patterns you see.

Discuss the advantages of using groups of tens and ones when writing the number.

If one selects as many groups of **TEN** as possible from any number of blocks above, then in a 2 digit number, the number of groups of **TENS** is always \_\_\_\_\_. The number of **ONES** is always \_\_\_\_\_. Explain your reasoning below.

**Build It. Draw It. Talk It. Write It. Now you OWN It!**



[www.UMathX.com](http://www.UMathX.com)