WEBINAR: Math or Magic? .. Number Tricks to Algebraic Thinking

Please REGISTER
info@umathx. com

The "U" in UMathX is … "UNDERSTANDING"

RUDY NEUFELD - AUTHOR

webinar
series with UMathX

Times: **We will accommodate you at the following times but also try to accommodate you at other times that are convenient for you.**

- **7 am CDT –** Baton Rouge / Houston / Chicago/ Birmingham
- **8 am EDT** – Dominican Republic / NY / Detroit / Toronto / Atlanta
- **9 am Atlantic Time** – Charlottetown / Halifax
- **3 pm E Africa Time** – Tanzania

Instructions Before the Webinar

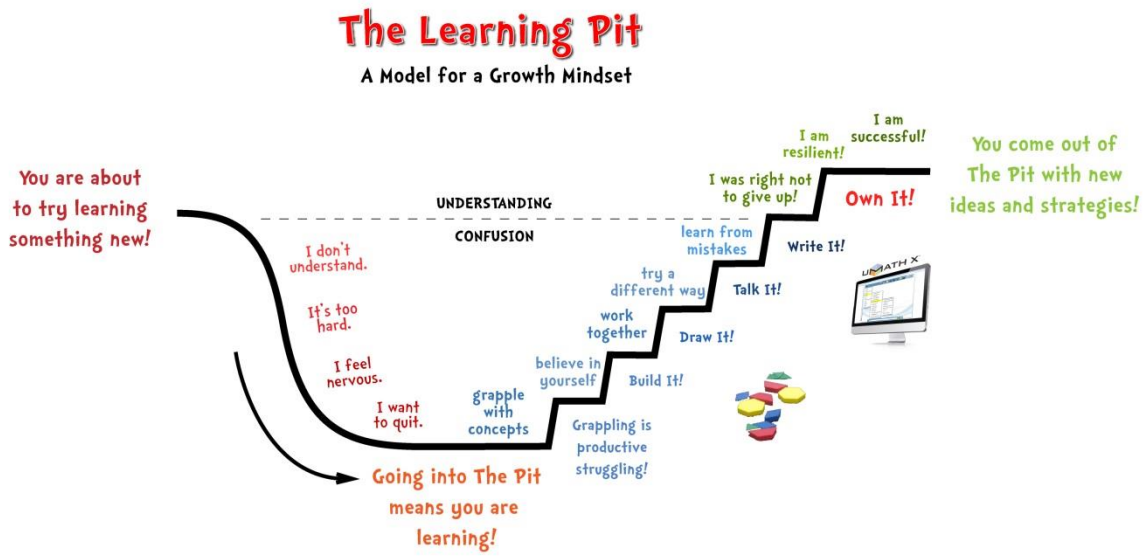
Register at **info@umathx.com** 24 hours before session.
Registered attendees will be invited to the webinar by email at the begin time.

The Learning Environment

NEEDS:

computer
internet
algebra tiles
frameworks
pencil/pen
crayons

- Play the video**: *UMathX–What is it? at www.umathX.com > Media > Videos***



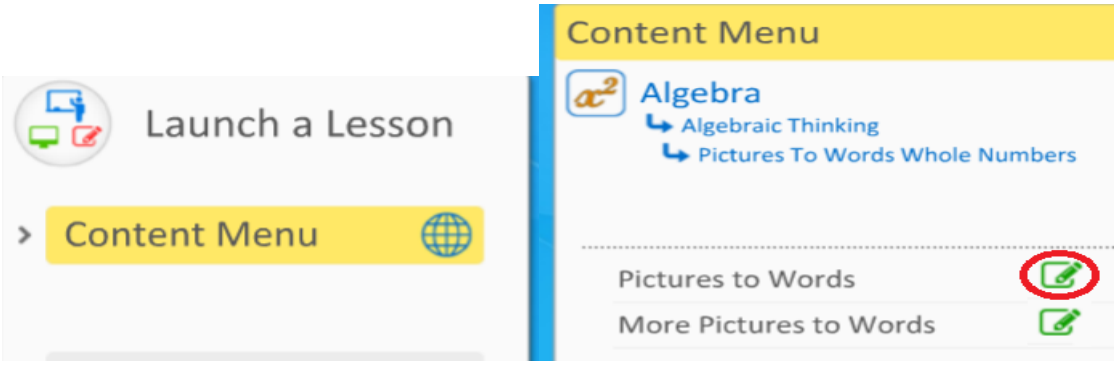
- Play the video ***http://www.jamesnottingham.co.uk/learning-pit***

- **Enter the URL** **www.umathx.com/preview** into the address box of any browser.
  Enter the **Username that you have been given for this UMathX session.**
  Enter the **Generic Password: umathx.**

Concept: Number Tricks to Algebraic Thinking

On Computer, select the – Content Menu.

Follow the path below:
Algebra > Algebraic Thinking > Pictures to Words Whole Numbers > Pictures to Words



Note a green pencil icon beside "Pictures to Words" which indicates that a **FRAMEWORK**, a 3 part model lesson for this lesson exists on paper. Click on it and print it. Follow directions.

UMATH X

Framework for Learning:

Algebraic Thinking – Pictures to Words

Leader's Name: .....

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

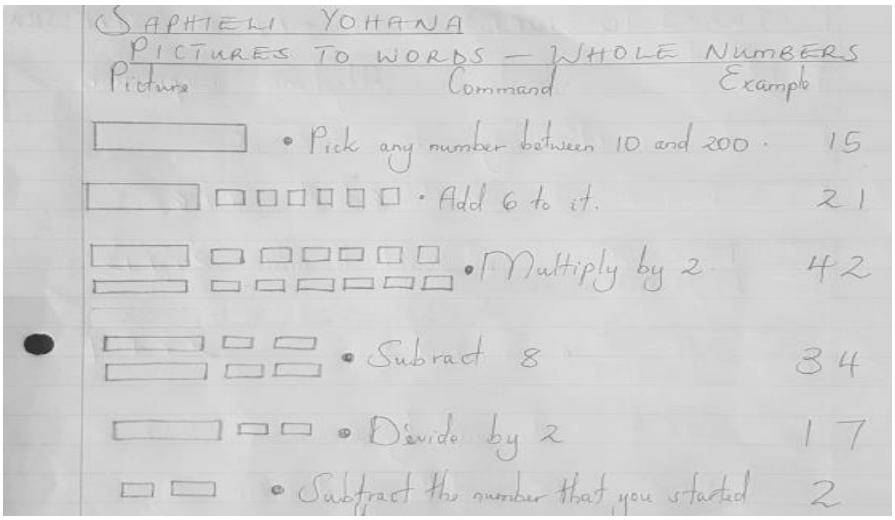
Instructor's Initials: .....

Getting Started:

In UMATH X **within the Content Menu, follow the path:**
Algebra > Algebraic Thinking > Pictures to Words Whole Numbers > Pictures to Words
Complete the ***Picture*** and ***Example 1*** columns in table below as you work through the lesson.

Picture	Command	Example 1	Example 2	Example 3
	Pick any # between 10 and 200.			
	Add 6 to it.			
	Multiply by 2.			
	Subtract 8.			
	Divide by 2.			
	Subtract the # you started with.			

Do you think the answer will ***always*** be the ***same***? **Explain.**



To UMathX … www.umathx.com/preview

Working In It: **Complete** the table below using three numbers of your choice.

Picture	Command	Example 1	Example 2	Example 3
	Pick any # between 10 and 100.			
	Multiply by 2.			
	Add 6.			
	Add the # you started with.			
	Divide by 3.			
	Subtract 2.			

In UMATH X within the **Content Menu,** follow the path:
Algebra > Algebraic Thinking > Pictures to Words Whole Numbers > MORE Pictures to Words
Check your answers in the table above using the lesson. **Correct** any mistakes.

Reflect & Connect:
Go to www.umathx.com/supportsheets. **Select** *Algebra Section 1 – Introduction to Algebraic Thinking.* **Print** pages 1-2 and **complete** questions 1 – 3.

Write your own number trick and use it to complete the table below. **Exchange** papers with a partner. **Check** each other's work. **Discuss and correct** any mistakes.

Picture	Command	Example 1	Example 2	Example 3

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

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On Computer, key in the URL www.umathx.com/preview and

Login to UMathX – Content Menu.

Follow the path below:

Algebra > Tiles and Algebra > Area

Note a green pencil icon beside "**Area…The Concept**" which indicates that a **FRAMEWORK**, a 3 part model lesson for this lesson exists on paper. Click on it and print it. Follow directions.

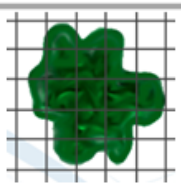
UMATH X

Framework for Learning: Tiles and Algebra

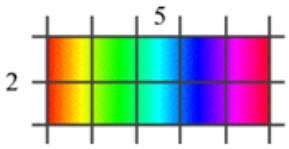
Leader's Name: .....

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

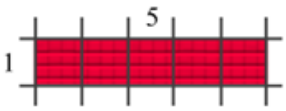
Getting Started: **Calculate** the area of each shape.



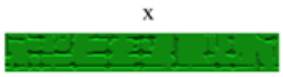
Area: _____ sq units



Area: _____ sq units



Area: _____ sq units



Area: ____ sq units

In UMATH X follow the path:

Algebra > Tiles and Algebra > Area… The Concept and **Area… Examples 1 - 3**

Compare your answers above with those in the lessons. **Correct** any mistakes.

Working In It:

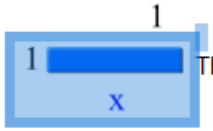
In UMATH X follow the path:

Algebra > Tiles and Algebra > Introduction to Tiles > Tile Representation and **Like Tiles**

Complete the notes below as you work through the lessons.

Tile Representation

This tile represents _____ and is called a _____ tile.



This tile represents an unknown number of unit tiles and is called an _____ tile.

This tile represents _____.

This tile represents an unknown number of _____ tiles and is called a _____ tile.

Like Tiles **Like tiles** are the same _____ and _____.

These **like tiles** represent ____ + ____ + ____ + ____ = ____

These are **unlike tiles**. They represent _____ + _____ .

Classify each of the following as **like tiles** or **unlike tiles**.
Write the value or expression represented by each set of tiles.




Expression: _____ Value: _____ Expression: _____ Value: _____

Reflect & Connect:

In UMATH X follow the path:
Algebra > Tiles and Algebra > Pictures to Words to Algebraic Expressions > Example 1
Complete the table below as you work through the lesson.

Algebra Tile Model	Words	Algebraic Expression
	Pick any #.	
	Add 6 to it.	
	Double the answer.	
	Subtract 8.	
	Divide by 2.	
	Subtract the original #.	

Extension work: Consider another possible way of interpreting the 3rd and the 5th lines in the table above.

Go to www.umathx.com/supportsheets.
Select *Algebra Section 2 – Tiles and Algebra.*
Copy and complete question 2 in your notebook.

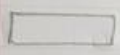
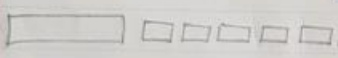
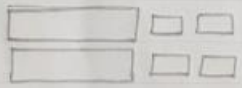
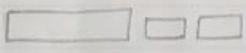
www.umathx.com/supportsheets www.umathx.com/preview

In this Framework, model 3 part lesson, you used
UMathX on Computer, Framework on Paper, Real Base 10 Blocks

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

PICTURES TO WORDS TO ALGEBRAIC EXPRESSION

Example 1.

Picture	Words	Algebraic Expression
	• Pick any number	x
	• Add 6 to it	$x+6$
	• Double the answer	$2x+12$
	• Subtract 8	$2x+4$
	• Divide by 2	$x+2$
	• Subract the original number	2

This answer will always be 2