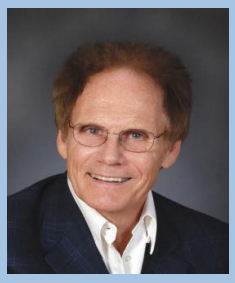
Partial Products – " Get It" with Visual Learning

Please REGISTER
info@umathx. com

EMPOWER THEM: Teach the Math – DON'T – Tell the Algorithm



RUDY NEUFELD - AUTHOR

webinar or seminar
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

Instructions Before the Webinar

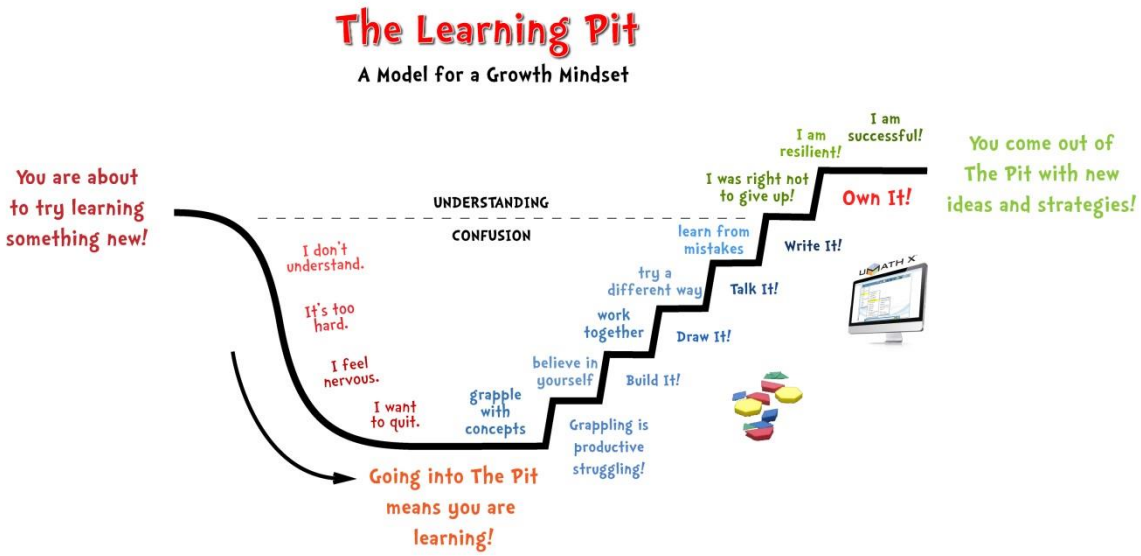
Register at **info@umathx.com** 24 hours before session.
Registered attendees will be invited to the webinar by email at the begin time.

NEEDS:

computer
internet
base10 blocks
frameworks
pencil/pen
crayons

The Learning Environment

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



- **Play the video *http://www.jamesnottingham.co.uk/learning-pit***
- **Enter URL www.umathx.com/preview** or the URL given to you 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 1: Multiply 2 & Digit Factors by a 1 Digit Factor

Login UMathX with a URL, login and password given to you.

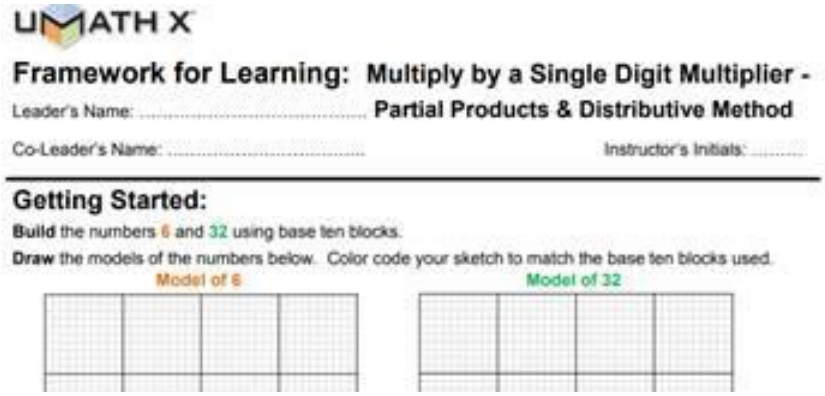
Click on the Content Menu

Select – **Content Menu.**

Follow the path below:

Whole Numbers & Integers > Multiplication & Division of Whole Numbers >
Multiply by a Single Digit Multiplier > Partial Products – Area > Ex 1 – With Blocks
Click on the green icon and print out … "Multiply by a Single Digit Multiplier"

Print out the 2 pages of the 3 part lesson below
Instructions for computer work and for work on the pages are given below.


UMATH X

Framework for Learning: Multiply by a Single Digit Multiplier - Partial Products & Distributive Method

Leader's Name: .....

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

Instructor's Initials: .....

Getting Started:

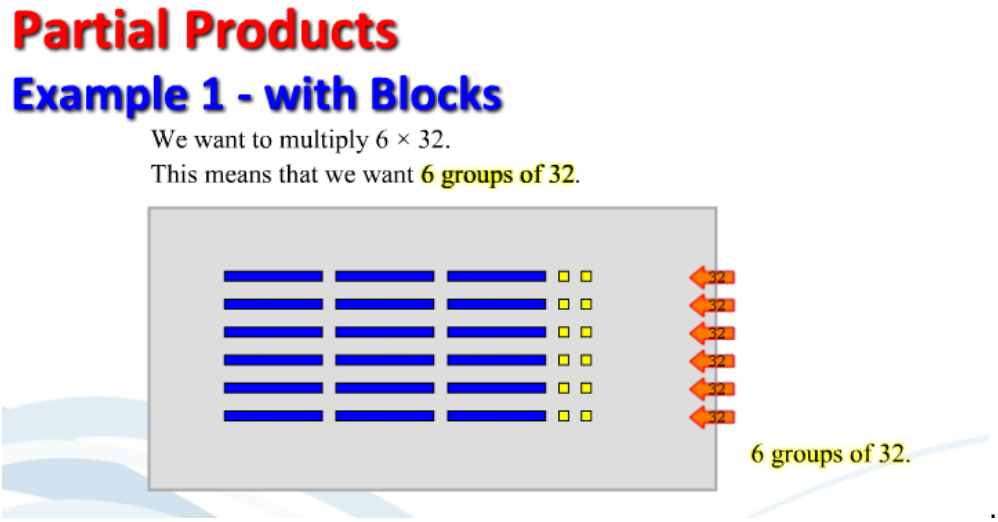
Build the numbers 6 and 32 using base ten blocks.

Draw the models of the numbers below. Color code your sketch to match the base ten blocks used.

Model of 6

Model of 32

The above Framework for Learning .. a 3 Part Lesson on Paper leads to the following section in UMathX on the computer.


Partial Products

Example 1 - with Blocks

We want to multiply 6 × 32.

This means that we want **6 groups of 32.**

32 32 32 32 32 32

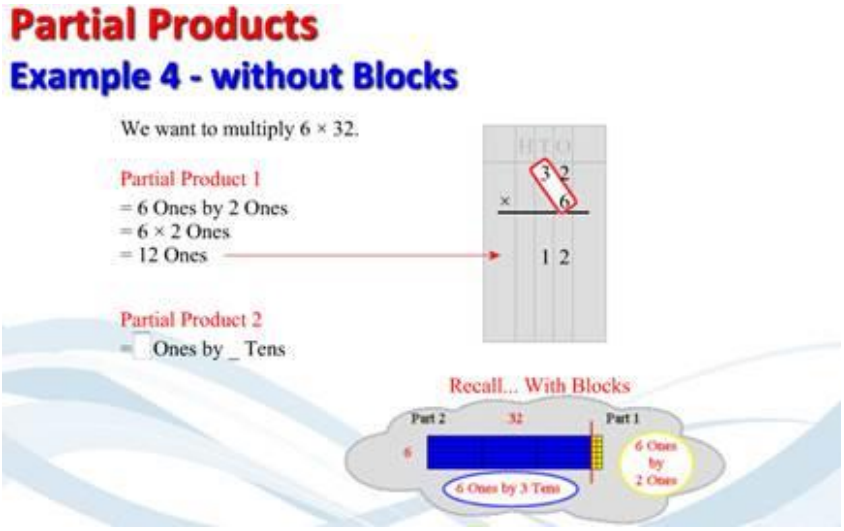
6 groups of 32.

Now go to the CONTENT MENU in UMathX and follow the following path:

Whole Numbers & Integers > Multiplication & Division of Whole Numbers >
Multiply by a Single Digit Multiplier > Partial Products – Area > Ex 4 – Without Blocks

Follow along and work within UMathX on your Computer.
A start on the computer is given on the next page.

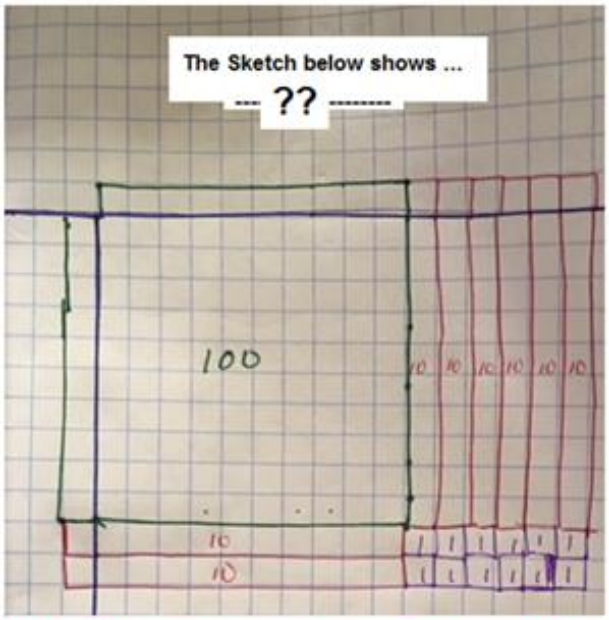
AHA !! .. note the relation between Ex 1 – With Blocks and Ex 4 – Without Blocks
After a few more examples checking Blocks and Without Blocks, you will SEE the Relationship!! **The Picture Helps!! GREAT!!**

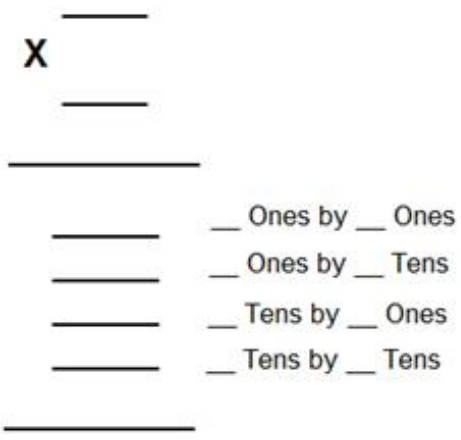


Concept 2: Multiply a 2 Digit Number by 2 Digit Number

Getting Started:

Use base 10 blocks to design the sketch below.
Then complete the calculation of a product below.

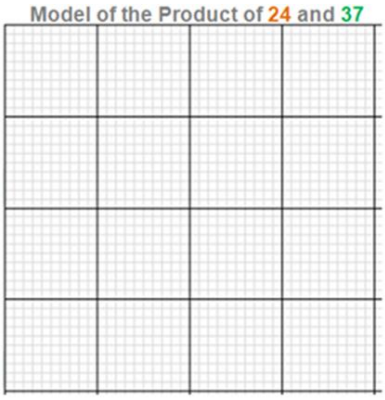




Note the Progression ... Computer, Paper, Base 10 blocks

Use base 10 blocks to model the product 24 X 37 on a desk.
You end up with one solid rectangle composed of <u>as few base 10 blocks as possible.</u>
Then color a color coded drawing of the model on the grid below.

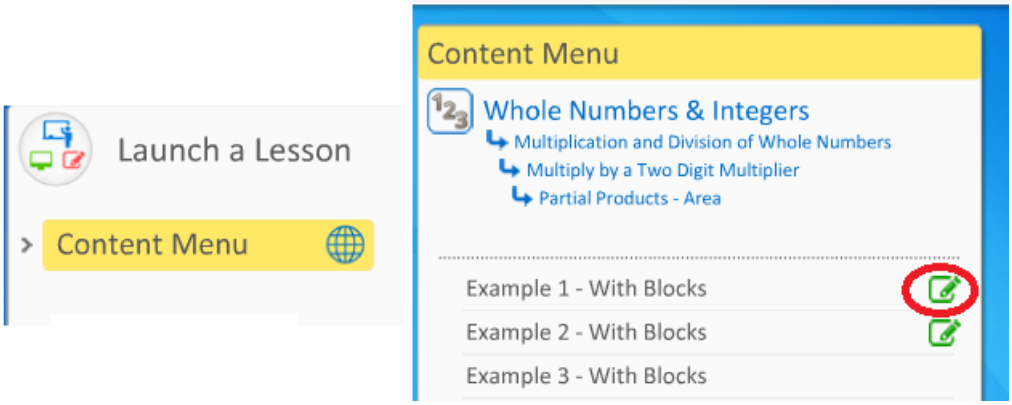
Model of the Product of 24 and 37



On Computer, use the URL .. www.umathx.com/preview Select the – Content Menu.

Follow the path below:

Whole Numbers & Integers > Multiplication & Division of Whole Numbers > Multiply by a Two Digit Multiplier > Partial Products – Area > Ex 1 – With Blocks

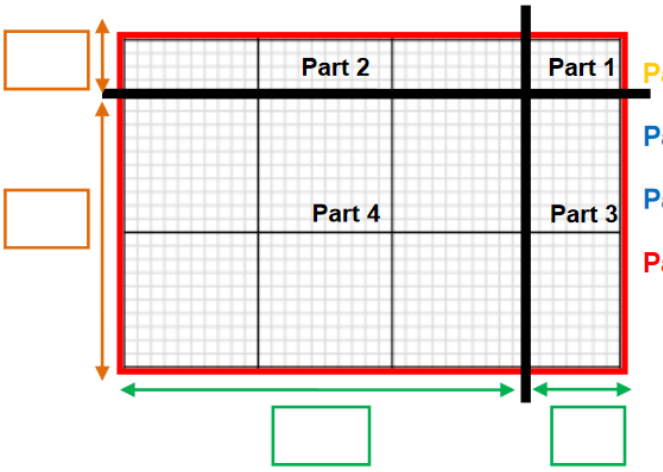


Note a green pencil beside "**Addition Without Regrouping**" indicating that a **FRAMEWORK**, a 3 part model lesson for this concept exists on paper.

Click on it and print out page 2, noted below.

As you work through the lesson, complete the corresponding notes and model below. Be sure to color code the model as follows: **yellow** for **ones**; **blue** for **tens**; **red** for **hundreds**.

Partial Products – Example 1 – With Blocks



Ones

Part 1: _____ Ones by _____ Ones =

Part 2: _____ Ones by _____ Tens = _____ Tens =

Part 3: _____ Ones by _____ Tens = _____ Tens =

Part 4: ____ Tens by ____ Tens = ____ Hundreds =

+

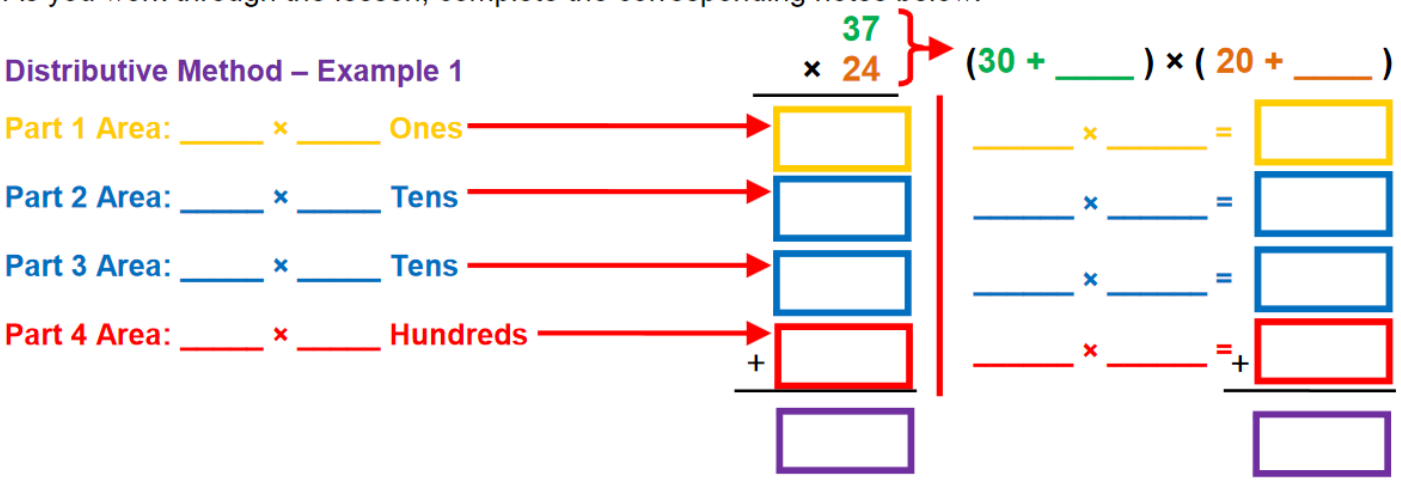
Summary: 24 × 37 = Sum of 4 _____ _____

= _____ of Part 1 + _____ of Part 2 + _____ of Part 3 + _____ of Part 4

From the menu on the left:

Hover over Strand: **Whole Numbers & Integers**
Hover over Section 3: **Multiplication and Division of Whole Numbers**
Hover over the Lesson: **Multiply by a Two Digit Multiplier**
Hover over the Sub Lesson: **The Distributive Method**
Select and complete the Sub Lesson: **Example 1**

As you work through the lesson, complete the corresponding notes below.



Reflect & Connect: In your notebook, **model** the product of **35 × 27** using **Partial Products** and the **Distributive Method**. **Compare** and **discuss** your models with your partner. **Discuss** and make corrections before turning in this completed framework to your teacher.

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

Neufeld Learning Systems Inc

Within UMathX, Select the – **Content Menu.**

Follow the path below:

Whole Numbers & Integers > Multiplication & Division of Whole Numbers > Multiply by a Two Digit Multiplier > Partial Products – Area > Ex 4 – Without Blocks

Complete the following as you work through the exercise on the Computer.

ONCEMORE as in Concept 1..

Note the relation between Ex 1 – With Blocks and Ex 4 – Without Blocks

After a few more examples checking Blocks and Without Blocks, you will SEE the Relationship!! The Picture Helps!! GREAT!!