



# MATH NEWS

## Grade 5 | Module 1 | Topic A | Multiplicative Patterns

### Welcome

This document is created to give parents and students a better understanding of the math concepts found in the Eureka Math (© 2013 Common Core, Inc.) that is also posted in the [Engage New York](#) material taught in the classroom. Grade 5 Module 1 of Eureka Math ([Engage New York](#)) covers place value and decimal fractions. This newsletter will discuss Module 1, Topic A.

### Topic A Objective

- Reason concretely and pictorially using place value understanding to relate adjacent base ten units from millions to thousandths.
- Reason abstractly using place value understanding to relate adjacent base ten units from millions to thousandths.
- Use exponents to name place value units and explain patterns in the placement of the decimal point.
- Use exponents to denote powers of 10 with applications to metric conversions.

### Words to Know

*The following are key vocabulary words for this topic*

Students will use a place value chart to understand how numbers are related to each other from the **millions** place to the **thousandths** place.

Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones	Tenths	Hundredths	Thousandths
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An **equation** is a statement that two mathematical expressions have the same value, indicated by use of the symbol =.

*Example:  $12 = 4 \times 2 + 4$*

$1 \text{ kg} = 1000 \text{ g}$	$1 \text{ km} = 1000 \text{ m}$
$1 \text{ L} = 1000 \text{ mL}$	$1 \text{ m} = 100 \text{ cm}$

A **millimeter** is a metric unit of length equal to 1 thousandths of a meter.

### Focus Area: Topic A

*Multiplicative Patterns on the Place Value Chart*

Write the first factor above the dash line on the place value chart and the product or quotient under the dashed line, using arrows to show how the value of the digits changed. Write your answer in the blank.

$9.38 \times 100 = \underline{938}$

thousands	hundreds	tens	ones	• tenths	hundredths	thousandths
			9	.	3	8
	9	3	8			

$100 = 10 \times 10;$   
(digit moves twice to the left)

## Application Problems and Answers (cont.)

$$938 \div 100 = \underline{9.38}$$

thousands	hundreds	tens	ones	• tenths	hundredths	thousandths
	9	3	8			
			9	3	8	

$100 = 10 \times 10$ ;  
(digit moves twice to the right)

An **exponent** is the number of times a number is used in a multiplication sentence.

Write the following numbers in exponential form.

$$10,000 = \underline{10^4}$$

$$100 \times 100 = \underline{10^4}$$

Write the following in exponential form and as a multiplication sentence using only 10 as a factor.

$$10,000 = \underline{10^4} = \underline{10 \times 10 \times 10 \times 10}$$

$$100 = \underline{10^2} = \underline{10 \times 10}$$

Write the following numbers in standard form.

$$8 \times 10^4 = \underline{80,000}$$

$$7500 \div 10^2 = \underline{75}$$

Complete the pattern.

0.05	0.5	<u>5</u>	50	<u>500</u>	<u>5,000</u>
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### Homework Help

Looking for assistance for to help complete nightly homework? Check out the following website to get digital copies of homework, as well as detailed explanations in video format:

[http://www.oakdale.k12.ca.us/cms/page\\_view?d=x&piid=&vpid=1401784829350](http://www.oakdale.k12.ca.us/cms/page_view?d=x&piid=&vpid=1401784829350)

Don't forget to check out [www.zearn.com](http://www.zearn.com) for extra practice as well!

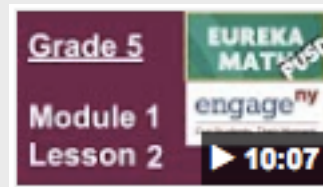
## Online Resources

Flipped learning is a great way to review topics that your student is learning in the classroom. The following are links to videos that give detailed explanations for each lesson in this topic.

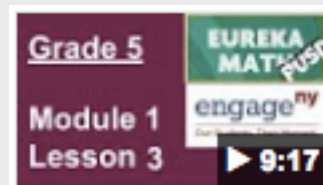
**Lesson 1:** <https://www.youtube.com/watch?v=49NPo4y9E9A>



**Lesson 2:** [https://www.youtube.com/watch?v=XvUeT3\\_xNj0](https://www.youtube.com/watch?v=XvUeT3_xNj0)



**Lesson 3:** [https://www.youtube.com/watch?v=NNprxeZ\\_7JU](https://www.youtube.com/watch?v=NNprxeZ_7JU)



**Lesson 4:** <https://www.youtube.com/watch?v=NA3al1U5mjg>

