EUREKA MATH²™

Module 4 - Lesson 4:

Relate the values of digits in a decimal number by using place value understanding.

CCSS Standard – 5.NBT.A.1

Raise your hand when you know the answer to each question.
Wait for my signal to say the answer.

What is the **value** of the **green** <u>underline digit</u>?

What is the **value** of the **red** <u>underline digit</u>?

Write a **multiplication equation** to show the relationship between the values of the underlined digits.

Write a **division equation** to show the relationship between the values of the underlined digits.

2,477

16,339

Whiteboard Exchange: Place Value Relationships

Raise your hand when you know the answer to each question.
Wait for my signal to say the answer.

What is the **value** of the **green** underline digit?

What is the **value** of the **red** underline digit?

Write a **multiplication equation** to show the relationship between the values of the underlined digits.

Write a **division equation** to show the relationship between the values of the underlined digits.

738,805

4,955,016

What is 10^2 in standard form?
Raise your hand when you know.

$$10^2 = 100$$

Rewrite the expressions below with the power of 10 in standard form to find the product:

$$400 \div 10^2$$
$$=$$

$$39,000 \div 10^3$$
$$=$$
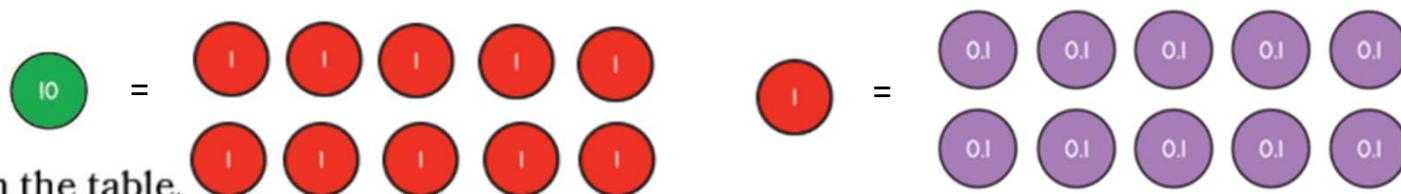
$$8,000,000 \div 10^6$$
$$=$$

$$1,050,000 \div 10^4$$
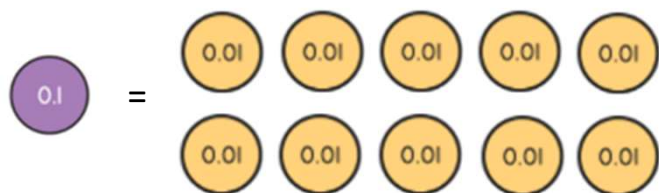$$=$$

$$6,000,000 \div 10^5$$
$$=$$

Use relationships between place value units to relate decimal numbers in unit form.

LEARN book page 35.

1. Complete the statements in the table.

10 Times As Much As	$\frac{1}{10}$ As Much As
1 ten is 10 times as much as **1 one** .	1 one is $\frac{1}{10}$ as much as **1 ten** .
1 one is 10 times as much as **1 tenth** .	1 tenth is $\frac{1}{10}$ as much as **1 one** .
1 tenth is 10 times as much as **1 hundredth**	1 hundredth is $\frac{1}{10}$ as much as **1 tenth** .
1 hundredth is 10 times as much as **1 thousandth** .	1 thousandth is $\frac{1}{10}$ as much as **1 hundredth** .

Use relationships between place value units to relate decimal numbers in unit form.

5 tenths is 10 times as much as ___**5 hundredths**___ .
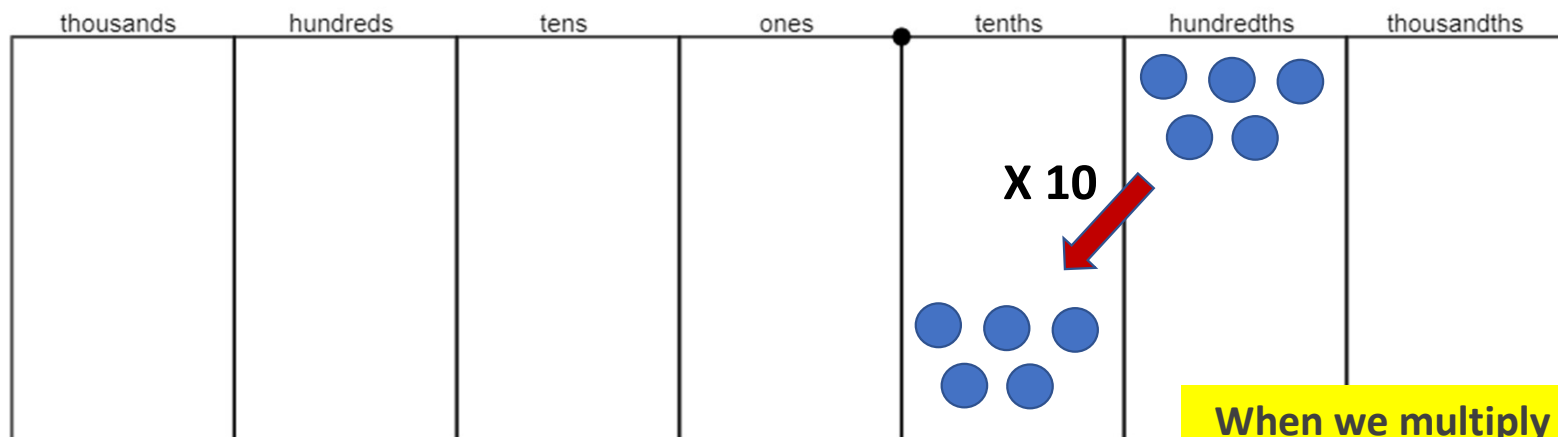
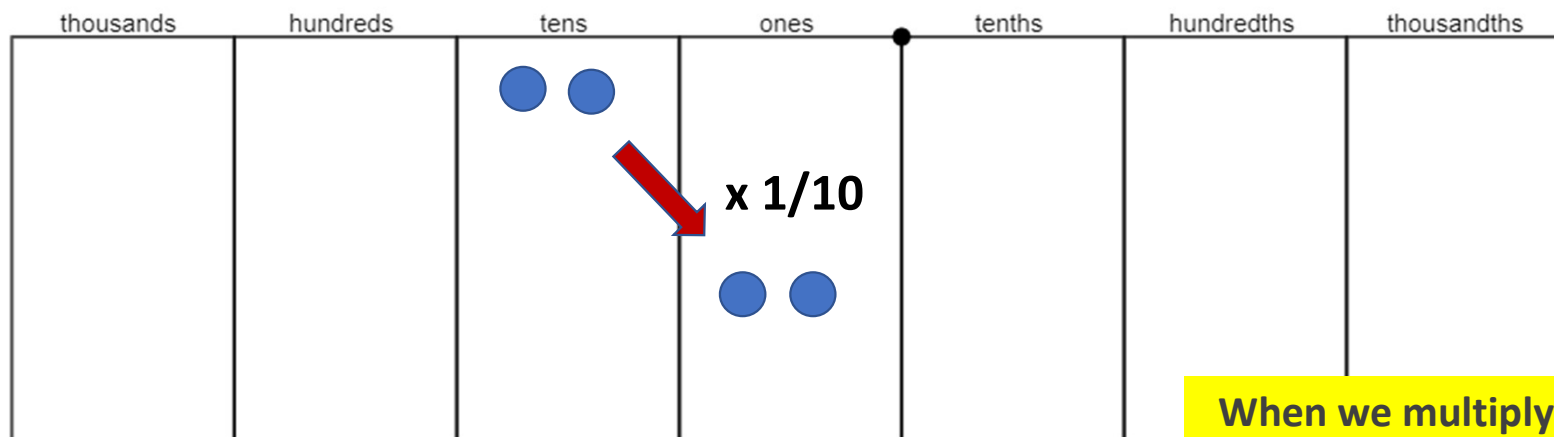| thousands	hundreds	tens	ones	tenths	hundredths	thousandths

X 10

When we multiply a number by 10, the digits shift one place to the left.

Use relationships between place value units to relate decimal numbers in unit form.

2 ones is $\frac{1}{10}$ as much as _____**2 tens**_____.
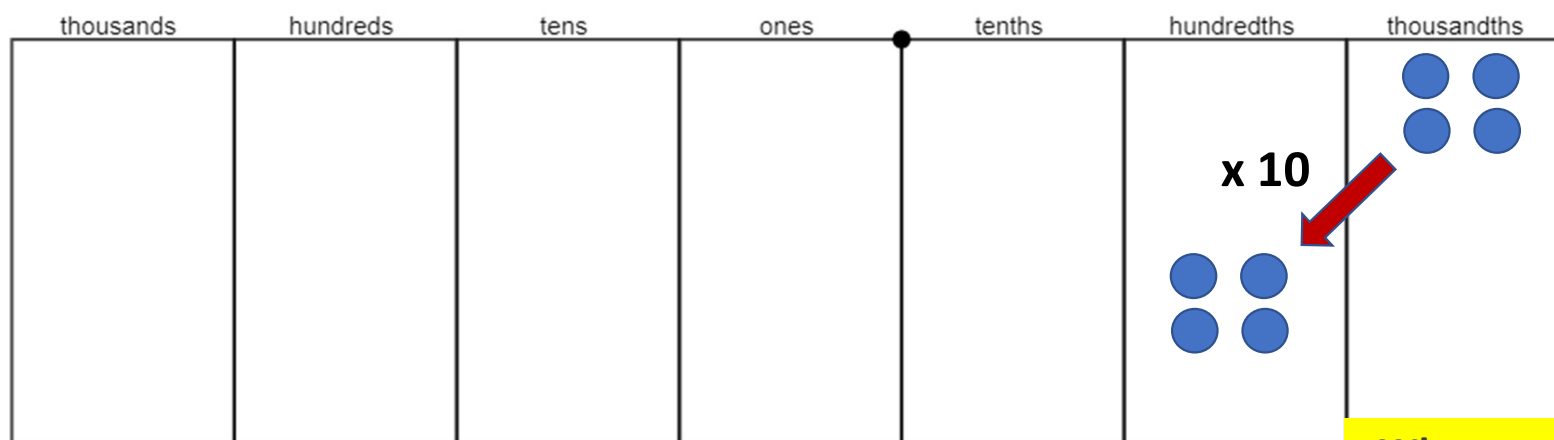
thousands	hundreds	tens	ones	tenths	hundredths	thousandths

x 1/10

When we multiply a number by 1/10, the digits shift one place to the right.

LEARN book page 35.

4 hundredths is 10 times as much as **4 thousandths**.

thousands	hundreds	tens	ones	tenths	hundredths	thousandths

x 10

0.04 = 10 x 0.004

When we multiply a number by 10, the digits shift one place to the left.

3 thousandths is $\frac{1}{10}$ as much as 3 hundredths.

thousands	hundreds	tens	ones	tenths	hundredths	thousandths

x 1/10
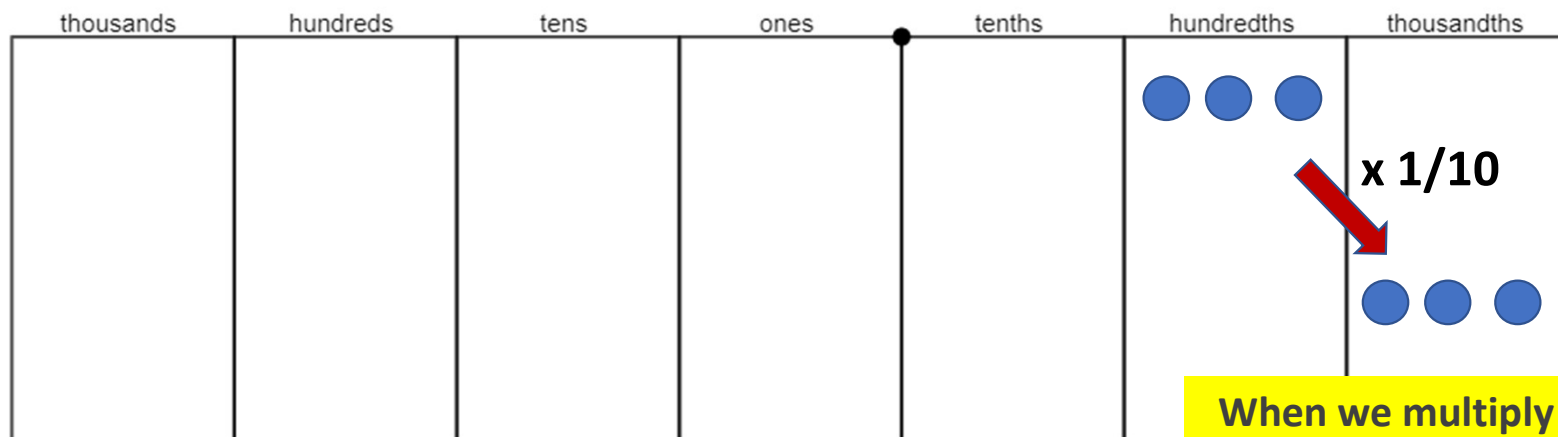
When we multiply a number by 1/10, the digits shift one place to the right.

0.003 = 1/10 x 0.03

Compare Repeated Digits in Decimal Numbers

Place the chart on page 33 of your LEARN book into the sleeve.

What is the value of this 7?

What is the value of this 7?

0.07 is 10 times as much as 0.007

0.007 is 1/10 as much as 0.07

tens	ones	tenths	hundredths	thousandths
6	3 •	1	7	7
			0.07	**0.007**
			10 x 0.007	**1/10 x 0.07**

Debrief – Relate the values of digits in a decimal number by using place value understanding.

Thumbs-up if you think this statement is TRUE.
Thumb-down if you think this statement is FALSE.
Be ready to justify your thinking.

7.9<u>9</u>0

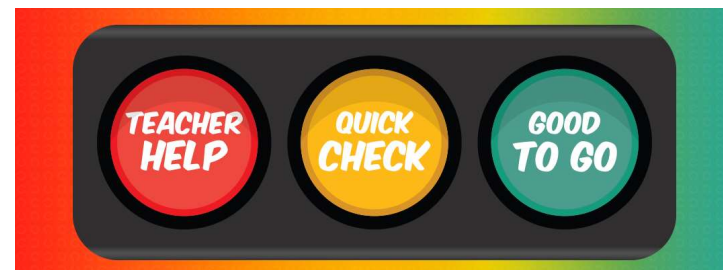9 tenths is 10 times as much as 9 hundredths

5.4<u>33</u>

~~3 thousandths is 10 times as much as 3 hundredths~~

3 thousandths is 1/10 as much as 3 hundredths.

TEACHER HELP   QUICK CHECK   GOOD TO GO

Name _____   Date _____

4

Consider the number shown.

$$0.2\ \boxed{2}\ 4$$

a. What is the value of the boxed digit?

b. What is the value of the underlined digit?

c. Complete the equations to show the relationships between the boxed digit and the underlined digit.

_____ = 10 × _____

_____ = $\frac{1}{10}$ × _____

Exit Ticket – PAGE 41

Small Group Time:
Problem Set Pages 38 – 39

Homework:
Page 27   APPLY BOOK