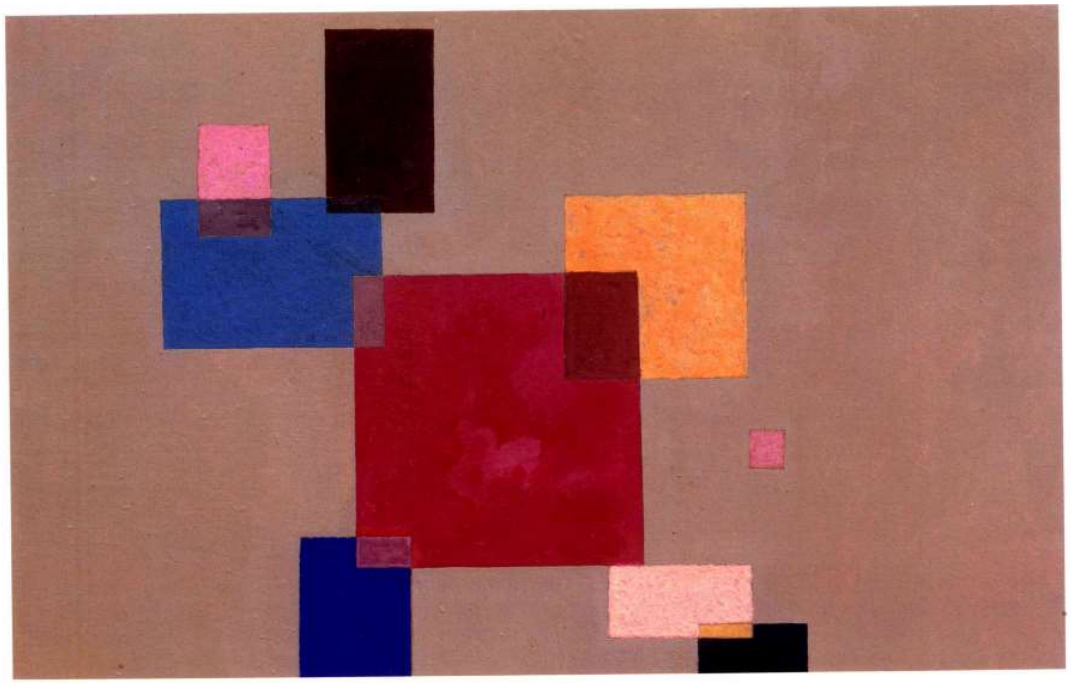
Module 1:

Place Value Concepts for Multiplication and Division with Whole Numbers



What does this painting have to do with math?

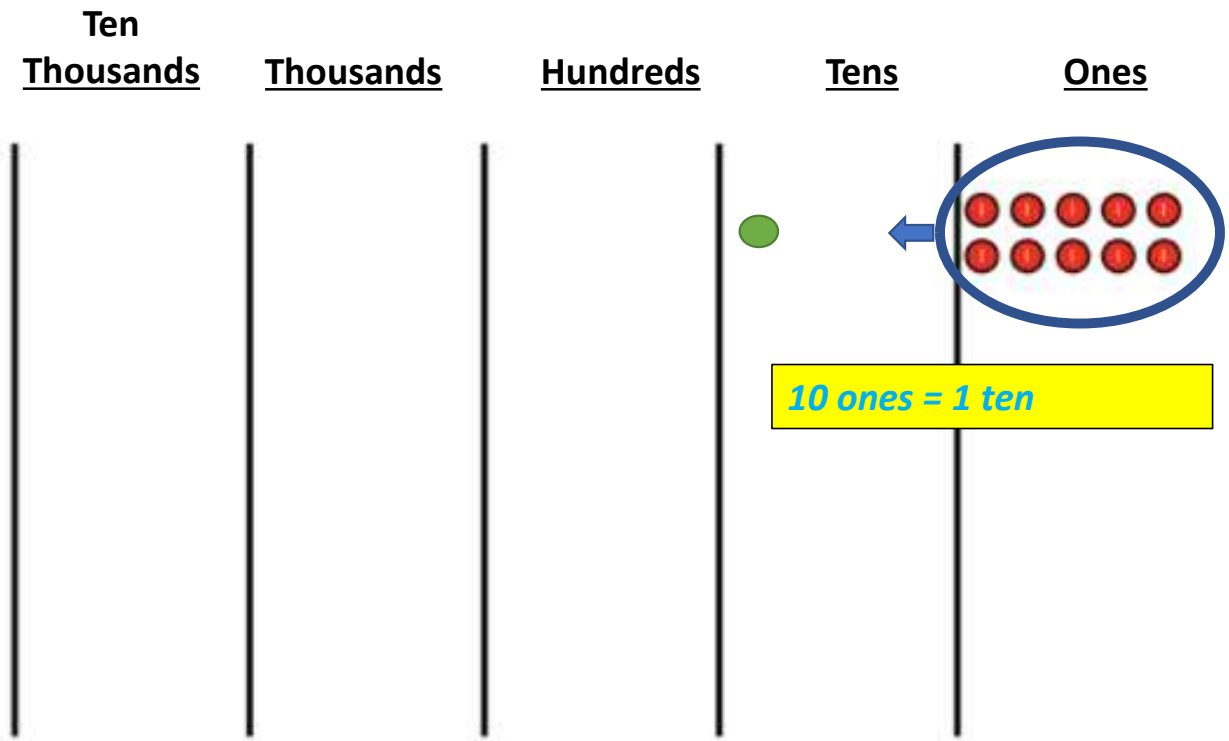
Lesson 1:

Relate adjacent place value units by using place value understanding.

CCSS Standard – 5.NBT.A.1

FLUENCY (10-min)

Rename Place Value Units

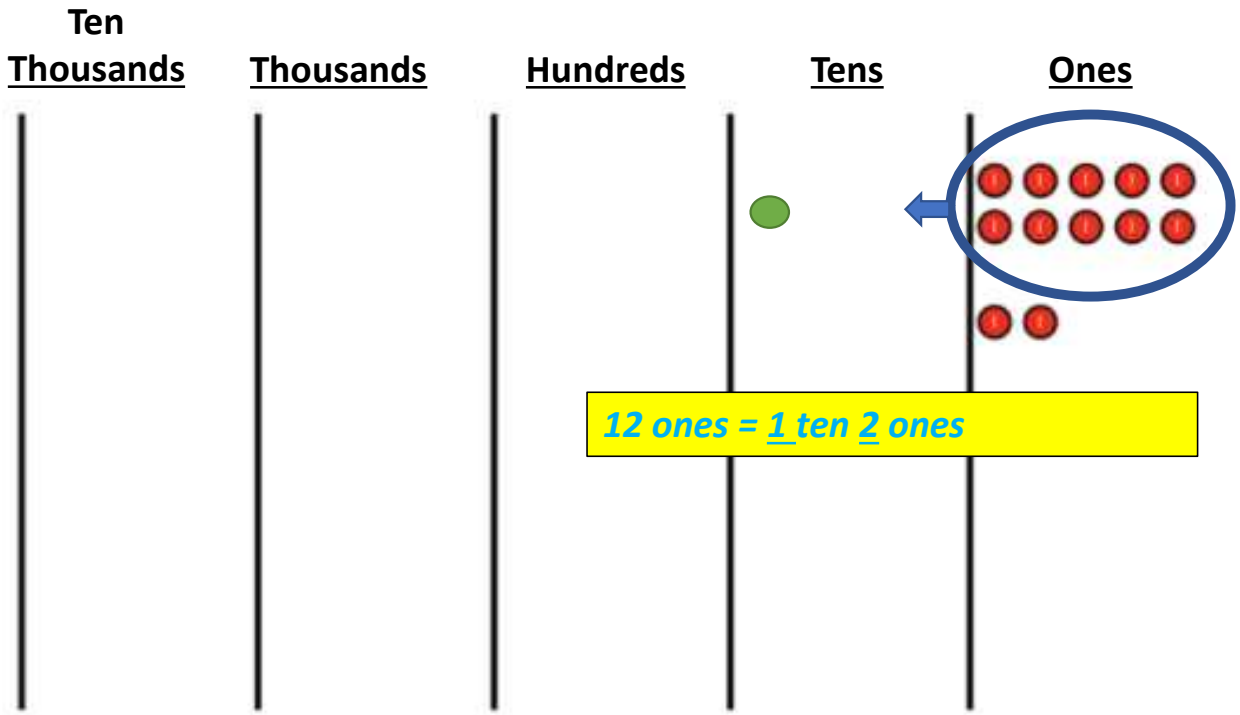


How many ones do you see?

How many tens would that equal?

So, we can say 10 ones is equal to 1 ten.

FLUENCY (10-min) **Rename Place Value Units**



How many ones do you see now?

How many tens would that equal?

So, we can say 12 ones is equal to 1 ten and 2 ones.

https://digital.greatminds.org/planning/teacher/guidance/1850

FLUENCY (10-min) **Rename Place Value Units**

12 ones = 1 ten 2 ones

10 tens = 1 hundred

13 tens = 1 hundred 3 tens

10 hundreds = 1 thousand

15 hundreds = 1 thousand 5 hundreds

10 thousands = 1 ten thousand

16 thousands = 1 ten thousand 6 thousand

10 ten thousands = 1 hundred thousand

18 ten thousands = 1 hundred thousand 8 ten thousands

FLUENCY (10-min) **Whiteboard Exchange: Place Value**

Task: I will show you a number with a digit underlined. Identify the place value and the value of the digit. Then write the number in EXPANDED FORM.

$$\underline{2},518$$

What place is the underlined digit? **thousands place**

What is the value of the underlined digit? **2,000**

How is the number written in expanded form? **2,000 + 500 + 10 + 8**

FLUENCY (10-min) **Whiteboard Exchange: Place Value**

Task: I will show you a number with a digit underlined. Identify the place value and the value of the digit. Then write the number in EXPANDED FORM.

$$9,\underline{7}03$$

What place is the underlined digit? **hundreds place**

What is the value of the underlined digit? **700**

How is the number written in expanded form? **9,000 + 700 + 3**

FLUENCY (10-min) **Whiteboard Exchange: Place Value**

Task: I will show you a number with a digit underlined. Identify the place value and the value of the digit. Then write the number is EXPANDED FORM.

$$\underline{5}3,194$$

What place is the underlined digit? **ten thousands place**

What is the value of the underlined digit? **50,000**

How is the number written in expanded form? **50,000 + 3,000 + 100 + 90 + 4**

FLUENCY (10-min) **Whiteboard Exchange: Place Value**

Task: I will show you a number with a digit underlined. Identify the place value and the value of the digit. Then write the number in EXPANDED FORM.

$$76{,}029$$

What place is the underlined digit? **thousands place**

What is the value of the underlined digit? **6,000**

How is the number written in expanded form? **70,000 + 6,000 + 20 + 9**

LAUNCH (5-min) **Which One Doesn't Belong?**

Which One Doesn't Belong is a thinking routine we will use this year. There are no right or wrong answers, but you must justify your reasoning. That means you have to explain why you picked the expression that you feel does not belong with the others.

"A" does not belong because it is the only choice that is not in metric units.

A 1 foot = 12 inches

"B" does not belong because it is the only choice that uses words instead of an equal sign.

B 1 meter is the same length as 100 centimeters

C 1 L = 1,000 mL

"C" does not belong because it is the only choice that uses abbreviated units.

D 1,000 grams = 1 kilogram

"D" does not belong because it is the only choice where 1 unit is to the right of the equal sign.

LEARN (35-min) **Organize and Count Bills to Compare**

Think…

What strategies or tools can help you count your collection?
Which tool would be the MOST helpful to count your collection?
Why did you choose the strategy you choose?

In your groups you will receive a collection of bills that you will count.

First, **ESTIMATE** how much is in your collection.
Next, discuss how you will ORGANIZE your collection to count it.

Strategies to consider:

- Grouping bills of the same unit
- Organizing bills on a place value chart
- Making groups of 10 of the same unit
- Writing expressions or equations

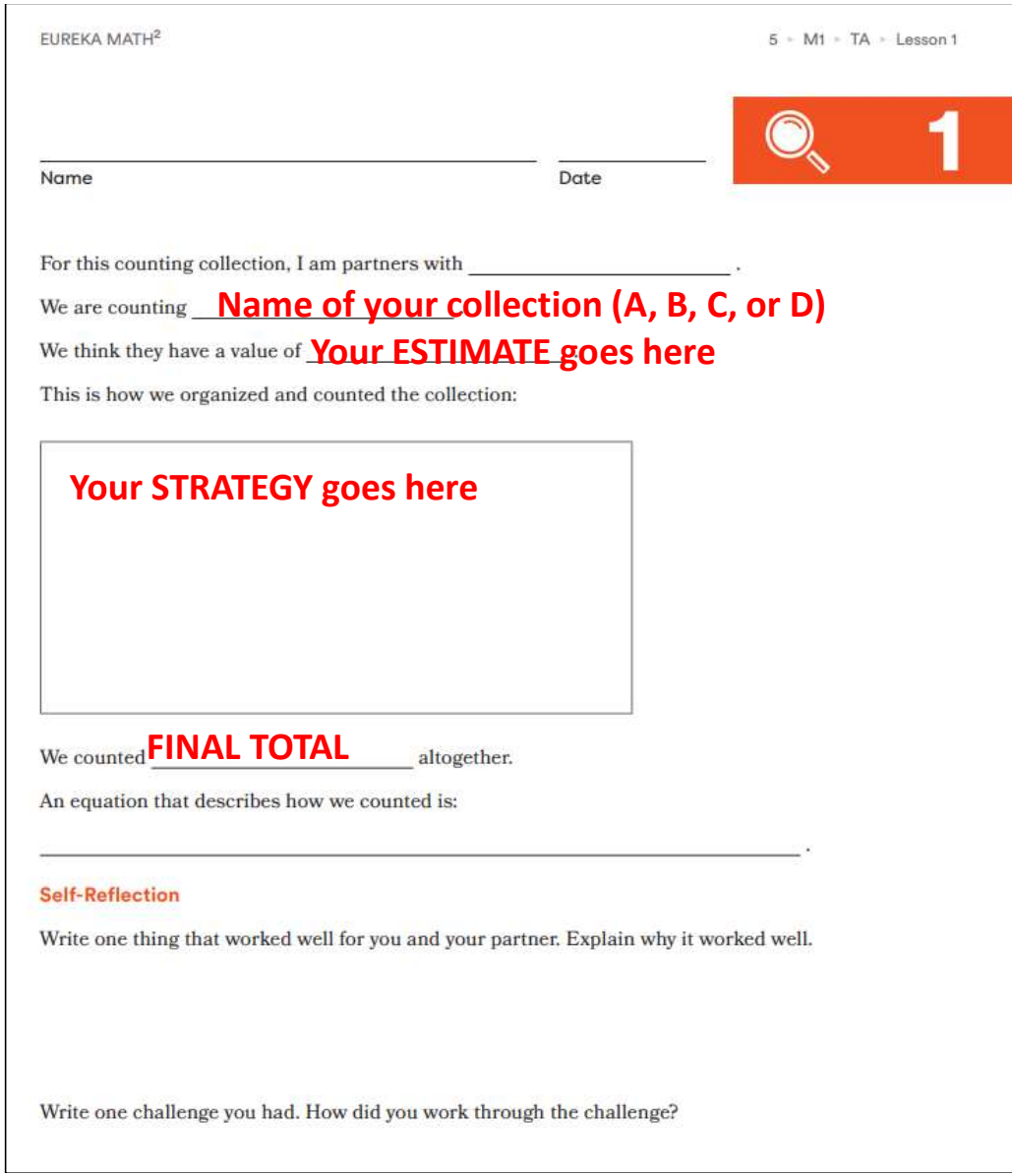
TASK: As a group, come up with a strategy for counting your collection of money. Fill out this Recording Sheet as you go!

Questions At the End:

- *How did you organize your bills?*
- *How did you find the total?*
- *How did you decide when to compose a larger unit?*

Check your totals! Did your group get it?

- *Collection A:* *$1,731,225*
- *Collection B:* *$2,988,396*
- *Collection C:* *$4,533,284*
- *Collection D:* *$9,947,271*



EUREKA MATH² 5 • M1 • TA • Lesson 1

1

Name _____ Date _____

For this counting collection, I am partners with _____.

We are counting **Name of your collection (A, B, C, or D)**

We think they have a value of **Your ESTIMATE goes here**

This is how we organized and counted the collection:

Your STRATEGY goes here

We counted **FINAL TOTAL** altogether.

An equation that describes how we counted is:

_____.

Self-Reflection

Write one thing that worked well for you and your partner. Explain why it worked well.

Write one challenge you had. How did you work through the challenge?

Do these 2s represent the same amount?

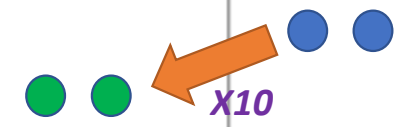
Standard Form: *$1,731,225*

Write the number in expanded form

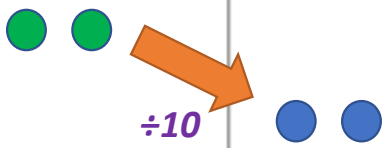
Expanded Form: *1,000,000 + 700,000 + 30,000 + 1,000 + 200 + 20 + 5*

THINK ABOUT IT: How are 2 hundreds similar or different from 2 tens?

millions (1,000,000)	hundred thousands (100,000)	ten thousands (10,000)	thousands (1,000)	hundreds (100)	tens (10)	ones (1)



200 is 10 times as much as 20



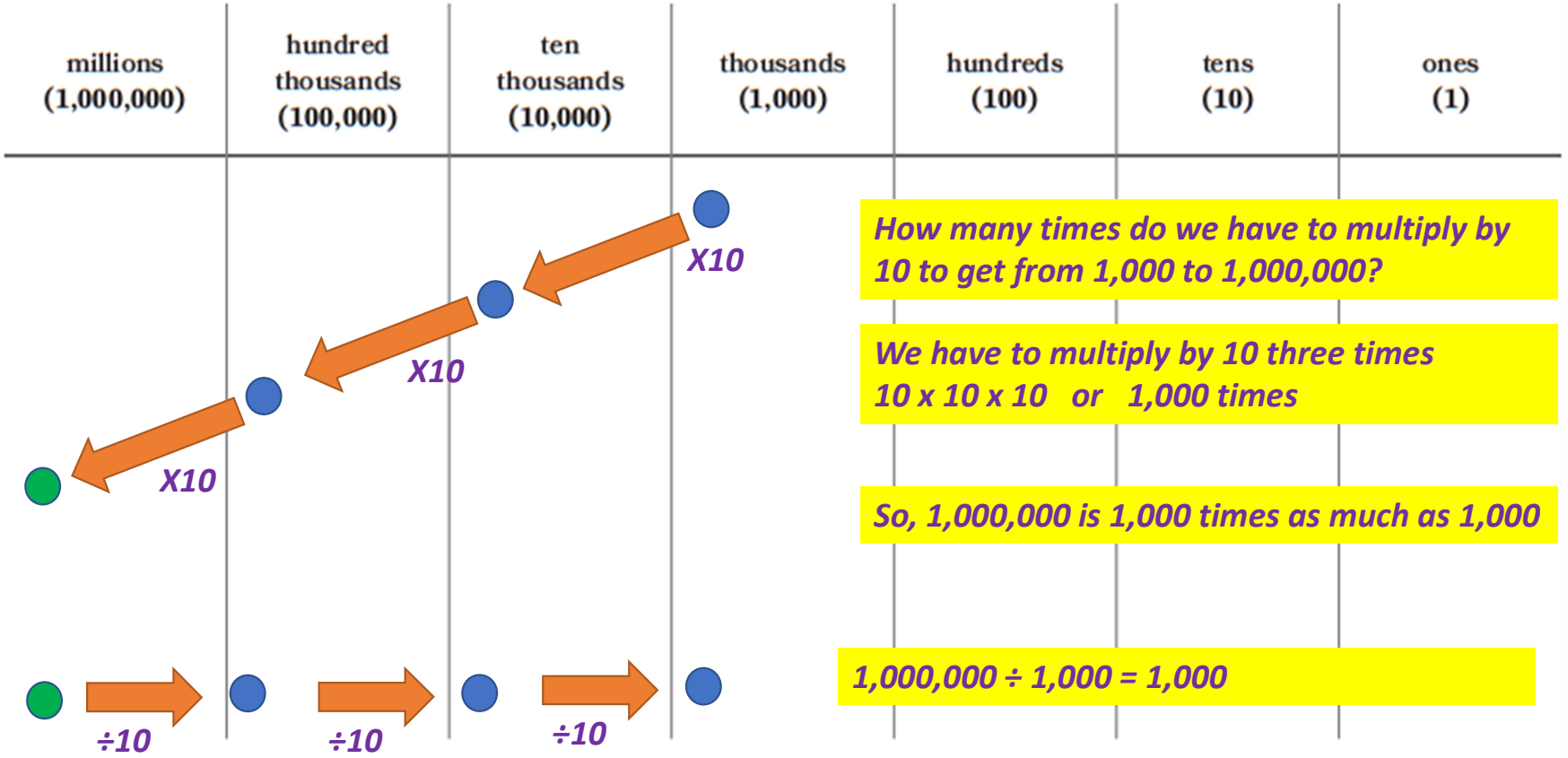
200 ÷ 10 = 20

20 is 10 times as small as 200

Do these 1s represent the same amount?

Standard Form: *$1,731,225*

Expanded Form: *1,000,000 + 700,000 + 30,000 + 1,000 + 200 + 20 + 5*



How many times do we have to multiply by 10 to get from 1,000 to 1,000,000?

We have to multiply by 10 three times
10 x 10 x 10 or 1,000 times

So, 1,000,000 is 1,000 times as much as 1,000

1,000,000 ÷ 1,000 = 1,000

$10 \div 10 = \underline{1}$

$100 \div 10 = \underline{10}$

$1{,}000 \div 10 = \underline{100}$

$10{,}000 \div 10 = \underline{1{,}000}$

$100{,}000 \div 10 = \underline{10{,}000}$

$1{,}000{,}000 \div 10 = \underline{100{,}000}$

Turn & Talk:
When we divide by 10, the quotient _____.

When we divide by 10, the quotient moves one place value to the right

When we divide by 10, the quotient is 10 times as SMALL as the dividend.

LAND (10-min)

Exit Ticket

Name _____ Date _____

1

52,285

a. Write a division equation that relates the 2 on the left to the 2 on the right.

b. Use the words *times as much* to compare the 5 on the left to the 5 on the right.

After Exit Ticket:

Work on pages 9 – 12 in workbook.

Small Group Time:
Finish pages 9 – 12.