Place Value of Whole Numbers Guided Notes   **Math 4**

What is place value?

Place value is the value of a digit depending on its **location in a number**. Each place value has a number from 1 to 9. We count up to 9 in each place and when we get to 10 we move into the next place value. That means that **the place value to the left of the digit is 10 x larger than the digit to its right**. And that means **the place value to the right of the digit is 10 x smaller than the digit to its left**.

We start with ones and count up to 9, then we move on to tens. That means there are 10 ones in 1 ten. And that 1 ten is 10 times bigger than 1.

For example, there are 10 tens in 1 hundred so that means that
100 is ten times bigger than 10 (10 x 10 = 100)
That also means that
10 is 10 times smaller than 100 (100 ÷ 10 = 10)

Place Value of Whole Numbers Guided Notes   Math 4

10 Ones = **1 x 10** = **1 Ten**

10 Tens = **10 x 10** = **1 Hundred**

10 Hundreds = **10 x 100** = **1 Thousand**

10 Thousands = **10 x 1,000** = **1 Ten Thousand**

10 Ten Thousands = **10 x 10,000** = **1 Hundred Thousand**

10 Hundred Thousands = **10 x 10,000** = **1 Million**
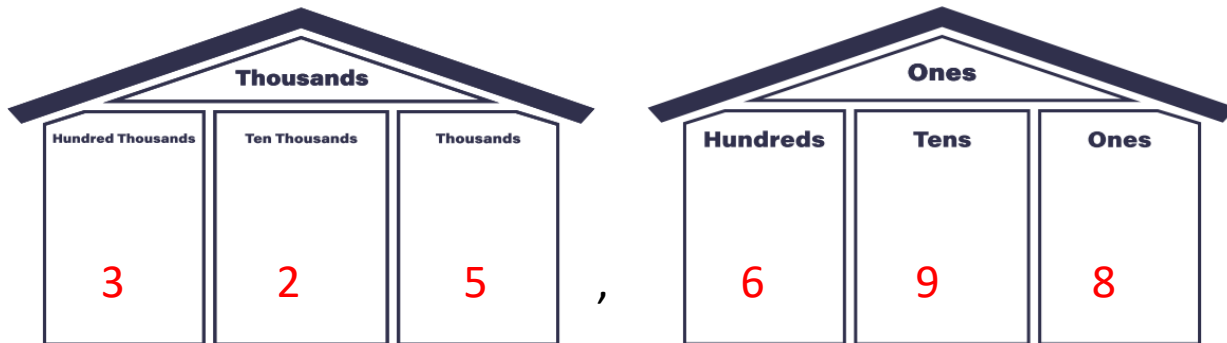
1, 234, 567

Millions   Hundred thousands   Ten Thousands   Thousands   Hundreds   Tens   Ones
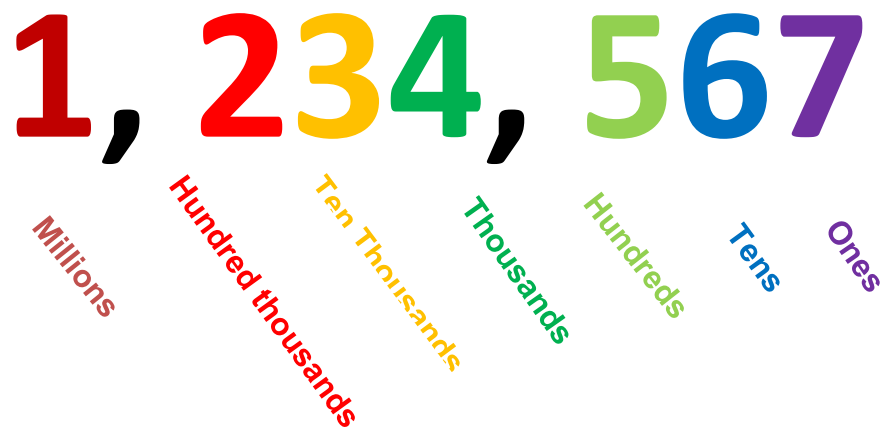
Notice that the digit **2** has a different value in the number **234,567** and **43,291.**

In 2,468, the 2 represents 2,000. In 43,291, the 2 represents 200.

2

Place Value of Whole Numbers Guided Notes   **Math 4**

Put the number 325,698 in the houses.

Hundred Thousands	Ten Thousands	Thousands		Hundreds	Tens	Ones
3	2	5	,	6	9	8

Time to Think

1. Would you rather have 5 ones or 5 hundreds? Why?
   I would rather have 5 hundreds because they are worth more than 5 ones.

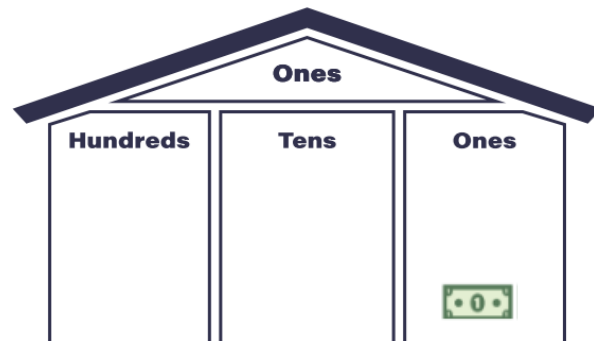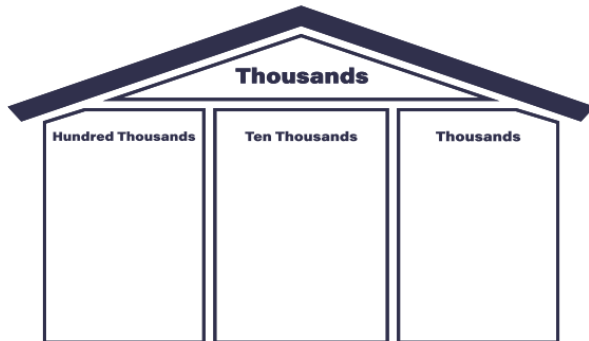2. How many tens are in one thousand?
   There are 100 tens in one thousand.

Place Value of Whole Numbers Guided Notes   **Math 4**

Draw a one dollar bill in the place value chart.

Thousands				Ones		
Hundred Thousands	Ten Thousands	Thousands		Hundreds	Tens	Ones
						[•0•]

Now draw nine more one dollar bills in the place value chart.

What larger unit can I make?

[•0•] [•0•] [•0•] [•0•] [•0•]
[•0•] [•0•] [•0•] [•0•] [•0•]   =   [•10•]

When we exchange the ten ones for a <u>ten</u>, the <u>1</u> becomes <u>10</u> times as large.

4

Place Value of Whole Numbers Guided Notes   Math 4

Draw a ten dollar bill in the place value chart.
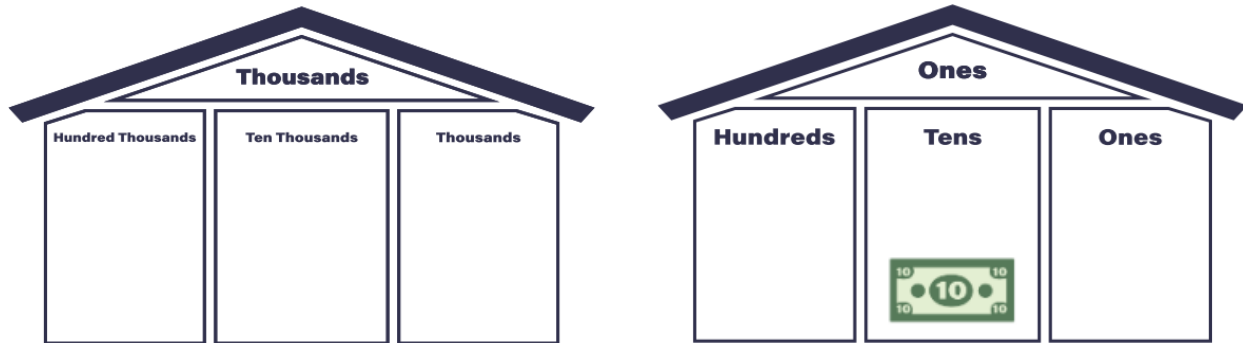
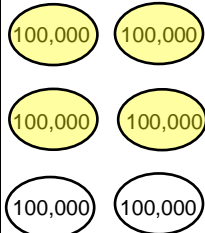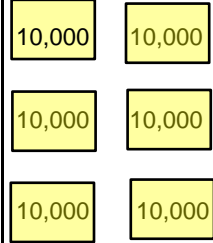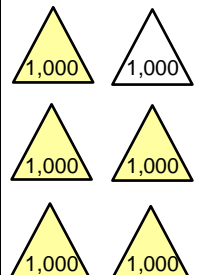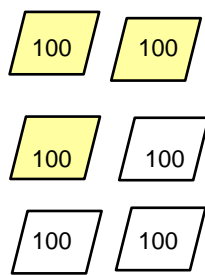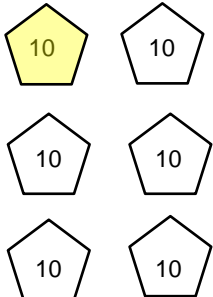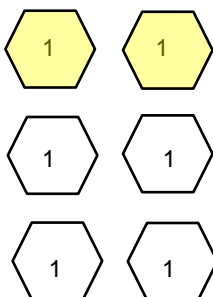Now draw nine more ten dollar bills in the place value chart.

What larger unit can I make?

When we exchange the ten ten dollar bills for a <u>hundred</u>, the <u>1</u> becomes <u>10</u> times as large.

Place Value of Whole Numbers Guided Notes   **Math 4**

465,312

Shade in the place value shapes and complete the table below to represent the number.

Hundred thousands	Ten thousands	Thousands	Hundreds	Tens	Ones

Using the base ten blocks below, circle four groups of 2 ten blocks. The first one is done for you. Then complete the multiplication statement.
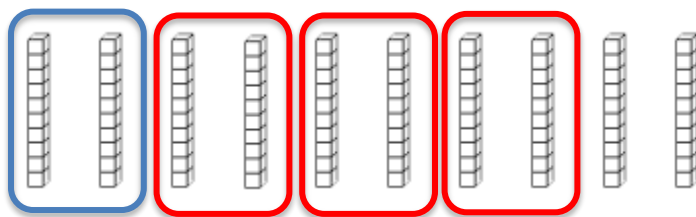
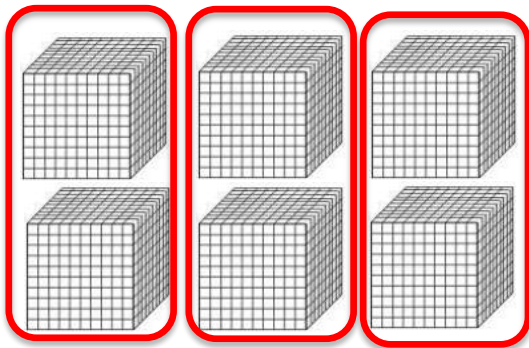4 x 20 = 80

Place Value of Whole Numbers Guided Notes   Math 4
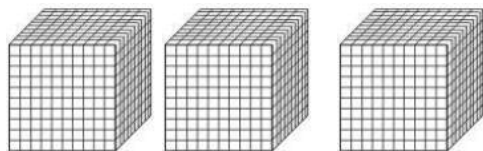
Time to think

What do you notice about the multiplication statement and the answer? Write a sentence.

You can multiply 4 x 2 and then add a zero.

Using the hundred blocks below, circle three groups of 2 hundreds blocks. Then complete the multiplication statement.

3 x 200 = 600

Time to think

What do you notice about the multiplication statement and the answer? Write a sentence.

You can multiply 3 x 2 and then add 2 zeros.

Place Value of Whole Numbers Guided Notes   **Math 4**

Time to Think

Using what we learned about place value and zeros:

1.   What is 800 ÷ 4?

2̲o̲o̲ because 8 ÷ 4 = 2 and then you can add the two zeros from the 800.

2.   What about 1000 ÷ 10?

1̲0̲0̲ because 10 ÷ 10 = 1 and then you have two zeros left.