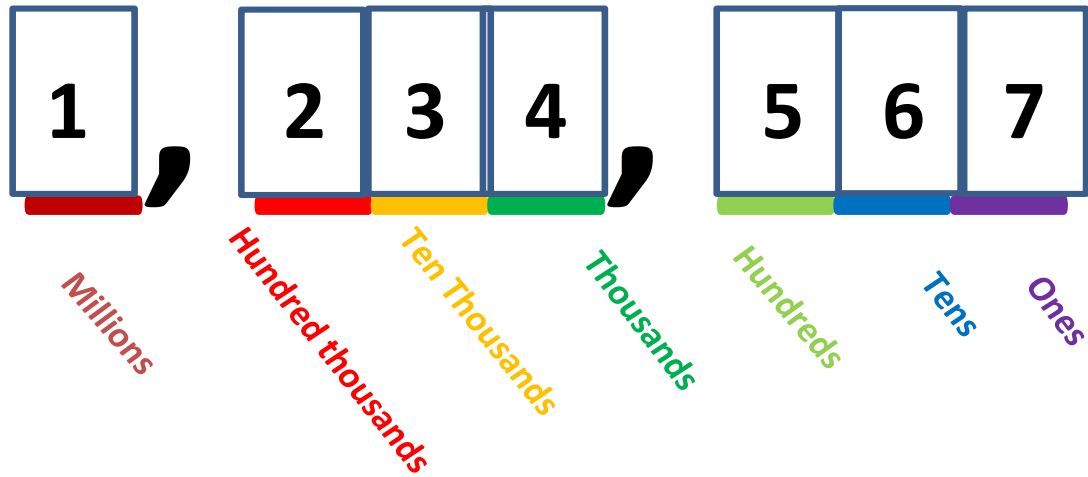# Place Value of Whole Numbers

Unit 1 Lesson 1

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 also means
the place value to the right of the digit is 10 x smaller than the digit to its left.

1 , **2** **3** **4** , **5** **6** **7**

Millions

Hundred thousands

Ten Thousands

Thousands

Hundreds

Tens

Ones

MathTeacherCoach.com

What is place value?

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)
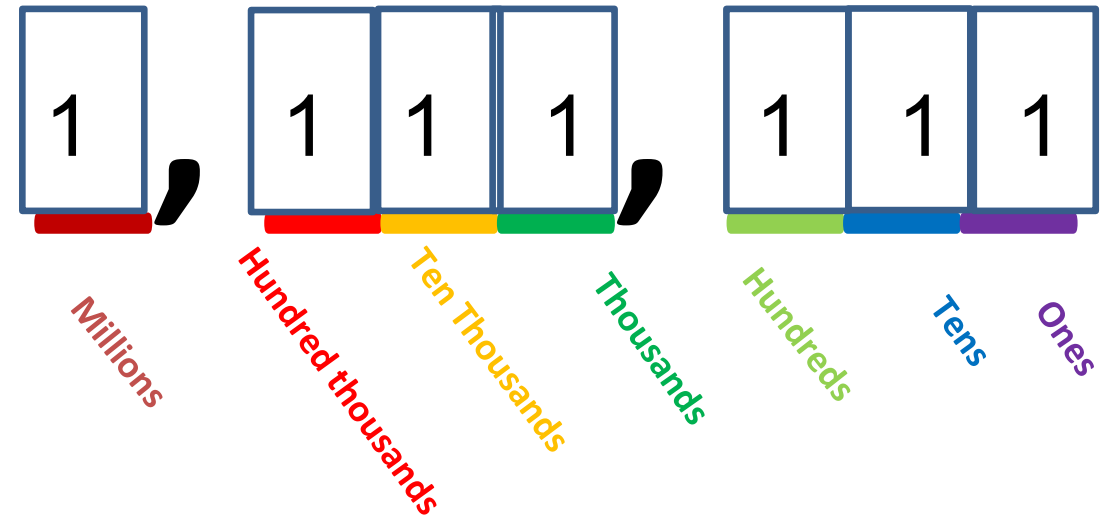
10 Ones = 1 x 10 = 1 Ten

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	,	1	1	1	,	1	1	1
Millions		Hundred thousands	Ten Thousands	Thousands		Hundreds	Tens	Ones

What is place value?

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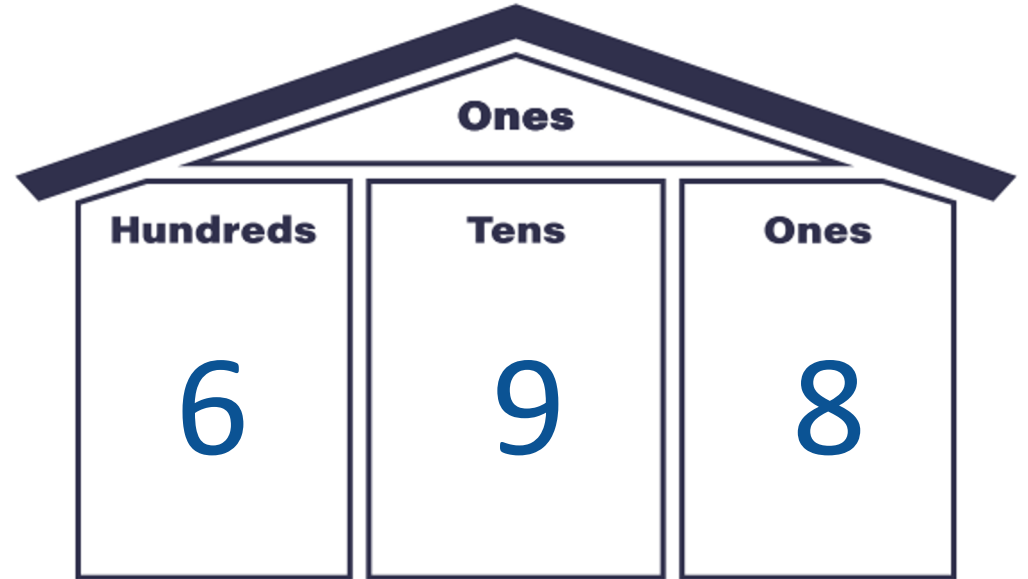
In 2,468, the 2 represents 2,000.
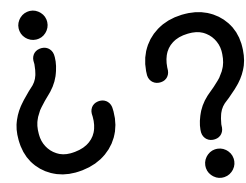In 43,291, the 2 represents 200.

Look at the location of the digit **2**. The digit **2** has a different value in the number **2**,468 and 43,**2**91.
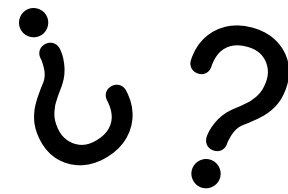
Put the number **325,698** in the houses.

Thousands

Hundred Thousands	Ten Thousands	Thousands
3	2	5

Ones

Hundreds	Tens	Ones
6	9	8

,
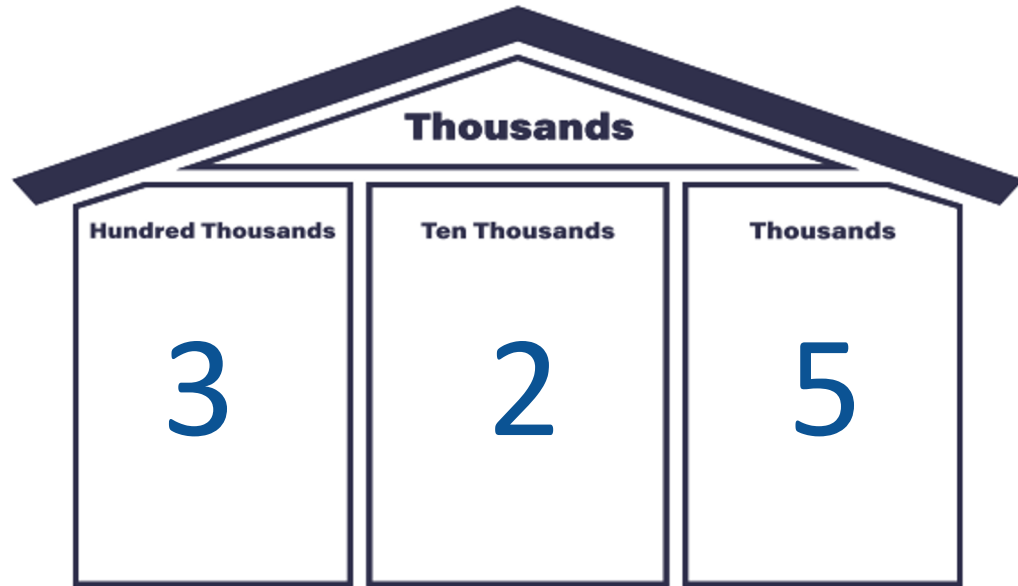
¿? **Time to Think** ¿?

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.**

Draw a one dollar bill in the place value chart.

Thousands

Hundred Thousands	Ten Thousands	Thousands

,

Ones
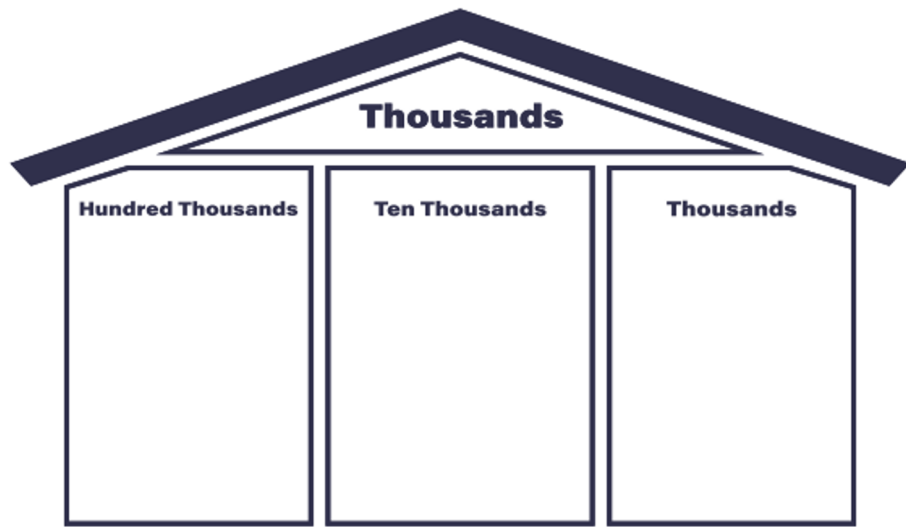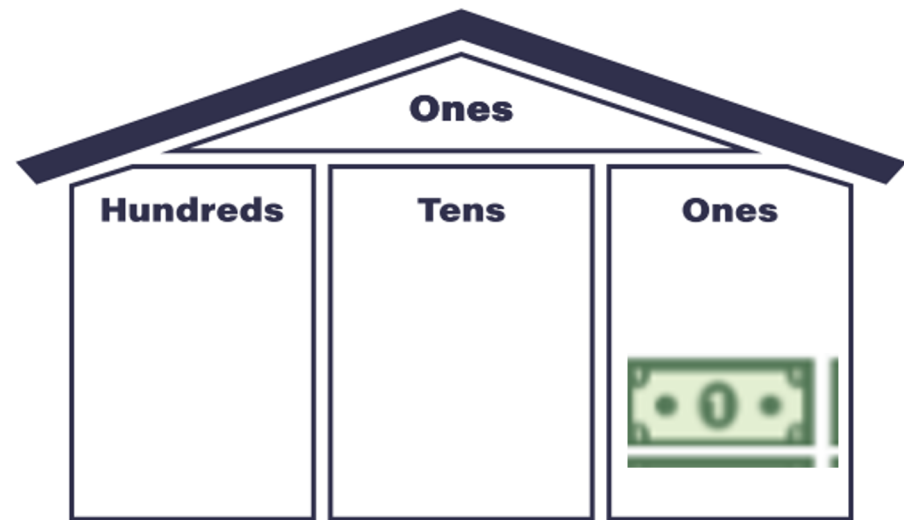
Hundreds	Tens	Ones

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

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

MathTeacherCoach.com

Color in the shapes to match the number given

412,976

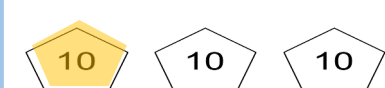| Hundred thousands	Ten thousands	Thousands	Hundreds	Tens	Ones
100,000 100,000 100,000 100,000 100,000 100,000 100,000 100,000 100,000	10,000 10,000 10,000 10,000 10,000 10,000 10,000 10,000 10,000	1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000	100 100 100 100 100 100 100 100 100	10 10 10 10 10 10 10 10 10	1 1 1 1 1 1 1 1 1

MathTeacherCoach.com

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.
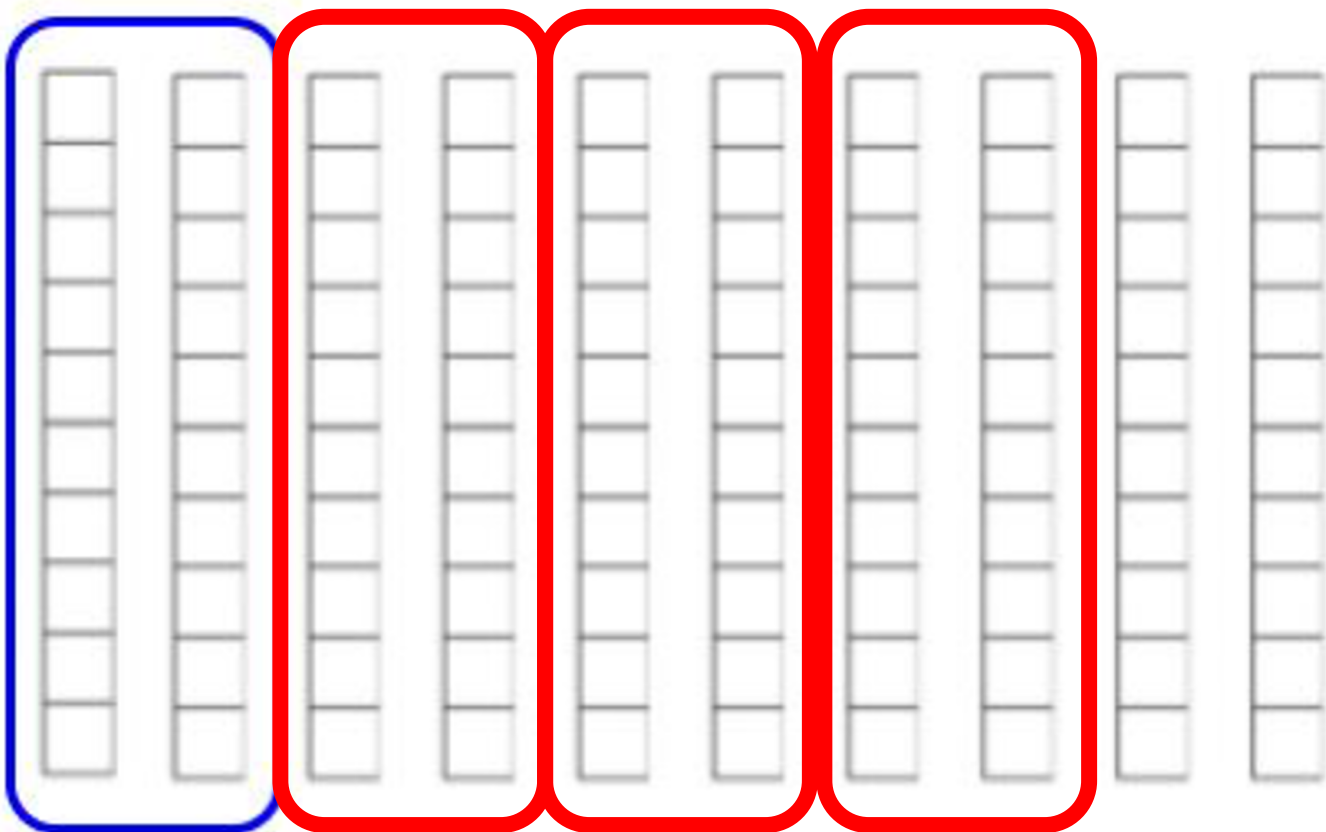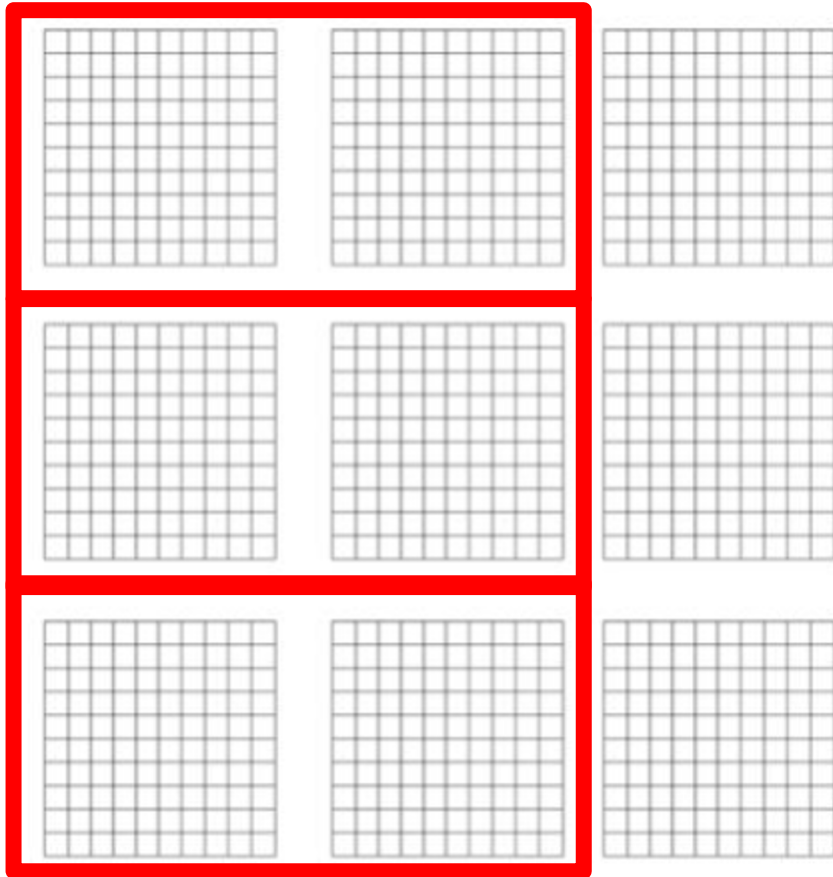

$4 \times 20 = \underline{\ 80\ }$

What do you notice about the multiplication statement and the answer? Write a sentence.
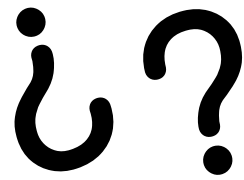
You can multiply 4 x 2 and then add a zero.

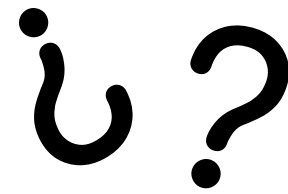**Using the hundred blocks below, circle three groups of 2 hundreds blocks. Then complete the multiplication statement.**

$3 \times 200 = \underline{\ \ 600\ \ }$

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.

¿? **Time to Think** ¿?

1. **Using what we learned about zeros, what is 800 ÷ 4?**

   > **200 because 8 ÷ 4 = 2 and then you can add the two zeros from the 800.**

2. **What about 1000 ÷ 10?**

   > **100 because 10 ÷ 10 = 1 and then you have two zeros left.**

MathTeacherCoach.com