**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 )

**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**

**Tens**

**Ten Thousands**

**Hundred thousands**

**Thousands**

**Hundreds**

**Millions**

**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.

Put the number 325,698 in the houses.



 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.

1. How many tens are in one thousand?

There are 100 tens in one thousand.

Draw a one dollar bill in the place value chart.





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

What larger unit can I make?



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

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 hundred, the 1 becomes 10 times as large.

**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 |
| 100,000 100,000100,000 100,000100,000 100,000 | 10,000 10,00010,000 10,00010,000 10,000 |   1,000 1,000   1,000 1,000  1,000 1,000 |   100 100 100 100 100 100 |  10 10 10 10  10 10 |  1 11. 1

 1 1 |

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

**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.

**Time to Think**

Using what we learned about place value and zeros:

1. What is 800 ÷ 4?

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

1. What about 1000 ÷ 10?

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