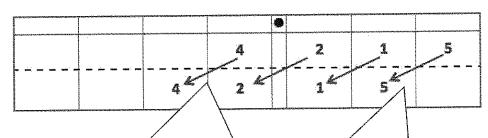
## G5-M1-Lesson 1

Note: It is common to encourage students to simply "move the decimal point" a number of places when multiplying or dividing by powers of 10. Instead, encourage students to understand that the decimal point lives between the ones place and the tenths place. The decimal point does not move. Rather, the digits shift along the place value chart when multiplying and dividing by powers of ten.

Use the place value chart and arrows to show how the value of the each digit changes.

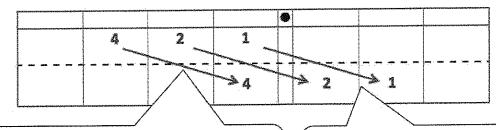
1.  $4.215 \times 10 = 42.15$ 



4 ones times 10 is 4 tens. Since I'm multiplying by 10, the value of each digit becomes 10 times greater.

When multiplying by 10, each digit shifts 1 place to the left on the place value chart.

2.  $421 \div 100 = 4.21$ 



4 hundreds divided by 100 is 4 ones. Since I'm dividing by 100, the value of each digit becomes 100 times smaller.

When dividing by 100, each digit shifts 2 places to the right on the place value chart.

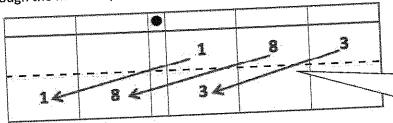
3. A student used his place value chart to show a number. After the teacher instructed him to multiply his number by 10, the chart showed 3,200.4. Draw a picture of what the place value chart looked like at first.

 $3\ \text{hundreds times}\ 10\ \text{is}\ 3\ \text{thousands}.$  The original number must have had a 3 in the hundreds place.

						The second secon	NAME OF THE PERSON NAME OF TAXABLE PARTY
			The second secon	-	***************************************	Landonikhia	thousandths
guardina de la constantina del constantina de la constantina de la constantina del constantina de la constantina de la constantina del					+oritis	MINISTER STATES	The state of the s
g	hundreds	tens	ones		AMAGAMAN MANAGAMAN MANAGAM	Chicago State Stat	1
thousands	125438993 minam	***************************	Anthony Control of the Control of th				1
EX DIS ARTURE : a ed on	ACCOUNT OF THE PARTY OF THE PAR					, max	ŧ
1					A.	4	1
1		· ***	0	24	1 1.3	.4199	
\$	3	dia.	16 <sub>0</sub> #	. #	1		. 1
ž.		(states)	1	ļ	1 .		
1		1		1		A STATE OF THE PARTY OF THE PAR	Name of the Party
§			And the second s	-	WHAT A PROPERTY OF THE PARTY OF	4	
1		Marian Marian					
	***************************************	/	-				

I used the place value chart to help me visualize what the original number was. When multiplying by 10, each digit must have shifted  $1\,$ place to the left, so I shifted each digit 1 place back to the right to show the original number.

4. A microscope has a setting that magnifies an object so that it appears 100 times as large when viewed through the eyepiece. If a small bug is  $0.183\ \text{cm}$  long, how long will the insect appear in centimeters through the microscope? Explain how you know.



When multiplying by 100, each digit shifts 2 places to the left on the place value chart.

The bug will appear to be  $18.3\ \mathrm{cm}$  long through the microscope.

Since the microscope magnifies objects 100 times, the bug will appear to be 100 times larger. used a place value chart to show what happens to the value of each digit when it is multiplied by 100. Each digit shifts 2 places to the left.