

WORKED EXAMPLE

Hundreds	Tens	Ones	tenths	hundredths
		1 1 1		
			0.1 0.1 0.1	

I have noticed that *3 ones counters in the ones column and 3 tenths counters in the tenths column.*
 I know that *each place value column gets ten times greater as you move left.*
 I know that *there are 10 tenths in each whole one so there are 30 tenths in 3 ones.*
 I know that *$3 \text{ ones} \div 10 = 3 \text{ tenths}$. 3 tenths is 0.3 as a decimal or $\frac{3}{10}$ as a fraction.*
 I know that *3 is 10 times greater than 0.3 because $0.3 \times 10 = 3$.*

multiply divide value column decimal fraction placeholder

REHEARSE

Describe the relationships between the counters.

Hundreds	Tens	Ones	tenths	hundredths
		1 1 1 1 1		
			0.1 0.1 0.1 0.1 0.1	

There are ____ ones and ____ tenths.

____ ones $\div 10 =$ _____.

This is ____ as a decimal or ____ as a fraction.

Hundreds	Tens	Ones	tenths	hundredths
	10 10 10	1 1		
		1 1 1	0.1 0.1	

The value shown on the top row is _____

The value shown on the bottom row is _____

____ $\div 10 =$ _____ _____ $\times 10 =$ _____

Hundreds	Tens	Ones	tenths	hundredths
	10 10	1	0.1 0.1 0.1 0.1	
		1 1	0.1	0.01 0.01 0.01 0.01

The value shown on the top row is _____

The value shown on the bottom row is _____

_____ $\div$ 10 = _____ _____ $\times$ 10 = _____

Draw the counters to show this number divided by 10.

Hundreds	Tens	Ones	tenths	hundredths
100	10 10 10 10		0.1 0.1	

The value shown on the top row is _____

The value shown on the bottom row is _____

_____ $\div$ 10 = _____ _____ $\times$ 10 = _____

Draw the counters to show this number divided by 100.

Hundreds	Tens	Ones	tenths	hundredths
100	10 10 10	1 1		

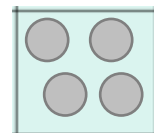
The value shown on the top row is _____

The value shown on the bottom row is _____

_____ $\div$ 10 = _____ _____ $\times$ 10 = _____

APPLY AND EXPLORE

Kelsey started with **4 counters** in a **column** of the place value grid:
She multiplied or divided her number by 10 or by 100.
What could her numbers have been?



Write as many possible calculations as you can. One is done for you:
 $4 \div 10 = 0.4$

APPLY AND EXPLORE

Think about everyday life. When is it useful to multiply and divide by 10 or 100?