

Multiplying and Dividing by 10 and 100

NAME:

When we multiply by 10 the digits in a number move 1 place to the left

$$3.6 \times 10 =$$

Thousands			Ones			Parts of one	
H	T	O	H	T	O	tenths	hundredths
					3	6	
				3	6		

No need to put in decimal place holders for you answers unless it is money

$$3.6 \times 10 = 36$$

(Short cut for decimal numbers – move the decimal one place to the right)

$$36 \times 10 = 360$$

(Short cut for whole numbers – add a zero)

Move the digits 1 place to the left when x10

$$460 \times 10 =$$

Thousands			Ones			Parts of one	
H	T	O	H	T	O	tenths	hundredths
			4	6	0		

$$4.8 \times 10 =$$

Thousands			Ones			Parts of one	
H	T	O	H	T	O	tenths	hundredths
					4	8	

$$0.58 \times 10 =$$

Thousands			Ones			Parts of one	
H	T	O	H	T	O	tenths	hundredths
					0	5	8

$$1.08 \times 10 =$$

Thousands			Ones			Parts of one	
H	T	O	H	T	O	tenths	hundredths
					1	0	8

When we multiply by 100, the digits move 2 places to the left.

Thousands			Ones			Parts of one	
H	T	O	H	T	O	tenths	hundredths
					3	6	
			3	6	0		

3.6 x 100 = 360

$$3.6 \times 100 = 360$$

(Short cut for decimal numbers – move the decimal two place to the right)

36 x 10 (Short cut for whole numbers – add two zeros)

When we multiply by 100, the digits move 2 place to the left.

Move the digits 2 places to the left when x100

$$380 \times 100 =$$

Thousands			Ones			Parts of one	
H	T	O	H	T	O	tenths	hundredths
			3	8	0		

$$45.7 \times 100 =$$

Thousands			Ones			Parts of one	
H	T	O	H	T	O	tenths	hundredths
				4	5	7	

$$4.08 \times 100 =$$

Thousands			Ones			Parts of one	
H	T	O	H	T	O	tenths	hundredths
					4	0	8

$$40.34 \times 100$$

Thousands			Ones			Parts of one	
H	T	O	H	T	O	tenths	hundredths
				4	0	3	4

When we divide by 10 the digits in a number move 1 place to the right.

$3.6 \div 10 = 0.36$ (Short cut for decimal numbers – move the decimal one place to the left)

$36 \div 10 = 3.6$ (Short cut for whole numbers – add 1 decimal place)

When we divide by 100 the digits in a number move 2 places to the right.

Move the digits 1 places to the right when $\div 10$

$380 \div 10 =$

Thousands			Ones			Parts of one	
H	T	O	H	T	O	tenths	hundredths
			3	8	0	t	h

$385 \div 10 =$

Thousands			Ones			Parts of one	
H	T	O	H	T	O	tenths	hundredths
			3	8	5	t	h

$38.5 \div 10$

Thousands			Ones			Parts of one	
H	T	O	H	T	O	tenths	hundredths
				3	8	5	

Move the digits 2 places to the right when $\div 100$

$380 \div 100$

Thousands			Ones			Parts of one	
H	T	O	H	T	O	tenths	hundredths
			3	8	0		

$385 \div 100$

Thousands			Ones			Parts of one	
H	T	O	H	T	O	tenths	hundredths
			3	8	5		

X10

Move the decimal 1 place to the right or add a 0

$$240 \times 10 =$$

$$48 \times 10 =$$

$$7.2 \times 10 =$$

$$24.7 \times 10 =$$

$$0.45 \times 10 =$$

$$10.45 \times 10 =$$

$$4.06 \times 10 =$$

$$23.24 \times 10 =$$

X100

Move the decimal 2 places to the right or add two 0's

$$45 \times 100 =$$

$$345 \times 100 =$$

$$320 \times 100 =$$

$$45.9 \times 100 =$$

$$23.05 \times 100 =$$

$$45.4 \times 100 =$$

$$45.06 \times 100 =$$

$$45.26 \times 100 =$$

Shortcut $\div 10$

For decimal numbers, move the decimal 1 place to the left

For whole numbers, remove a zero or add 1 decimal place

$$240 \div 10 =$$

$$24 \div 10 =$$

$$242 \div 10 =$$

$$2.4 \div 10 =$$

$$24.2 \div 10 =$$

Shortcut $\div 100$

For decimal numbers, move the decimal 2 places to the left

For whole numbers, remove a two zeros or add 2 decimal place

$$2400 \div 100 =$$

$$4562 \div 100 =$$

$$240 \div 100 =$$

$$242 \div 100 =$$

$$674.8 \div 100 =$$