

Multiplying by 10 and 100

NAME:

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

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

3.6 x 10 = 36

$$3.6 \times 10 = 36$$

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

Thousands			Ones			Parts of one	
H	T	O	H	T	O	tenths	hundredths
						t	h
			4	5	0		

450 x 10 =

Thousands			Ones			Parts of one	
H	T	O	H	T	O	tenths	hundredths
						t	h
		3	2	0	0		

3200 x 10 =

Thousands			Ones			Parts of one	
H	T	O	H	T	O	tenths	hundredths
						t	h
				3	3	7	

33.7 x 10 =

Thousands			Ones			Parts of one	
H	T	O	H	T	O	tenths	hundredths
						t	h
					6	3	5

6.35 x 10 =

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

$36 \times 100 = 3600$ **Short cut for whole numbers** – add two zeros

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

Thousands			Ones			Parts of one		
H	T	O	H	T	O	t	h	
				6	5			$65 \times 100 =$

Thousands			Ones			Parts of one		
H	T	O	H	T	O	t	h	
			5	8	0			$580 \times 100 =$

Thousands			Ones			Parts of one		
H	T	O	H	T	O	t	h	
					6	3		$6.3 \times 100 =$

Thousands			Ones			Parts of one		
H	T	O	H	T	O	t	h	
				5	7	0	3	$57.03 \times 100 =$

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

36 ÷ 10 = 3.6 Short cut for whole numbers – add 1 decimal place

Thousands	Ones	Parts of one	
H T O	H T O	tenths hundredths	
□ □ □	□ 3 9	t h	
□ □ □	□ □ □	□ □	$39 \div 10 =$
□ □ □	□ □ □	□ □	

Thousands	Ones	Parts of one	
H T O	H T O	tenths hundredths	
□ □ □	5 7 0	t h	
□ □ □	□ □ □	□ □	$570 \div 10 =$
□ □ □	□ □ □	□ □	

Thousands	Ones	Parts of one	
H T O	H T O	tenths hundredths	
□ □ □	□ □ 5	t h	
□ □ □	□ □ □	8 □	$5.8 \div 10 =$
□ □ □	□ □ □	□ □	

Thousands	Ones	Parts of one	
H T O	H T O	tenths hundredths	
□ □ □	□ 7 5	t h	
□ □ □	□ □ □	□ □	$75 \div 10 =$
□ □ □	□ □ □	□ □	

Thousands	Ones	Parts of one	
H T O	H T O	tenths hundredths	
□ □ □	6 6 0	t h	
□ □ □	□ □ □	□ □	$660 \div 10 =$
□ □ □	□ □ □	□ □	

Thousands	Ones	Parts of one	
H T O	H T O	tenths hundredths	
□ □ □	□ 2 2	t h	
□ □ □	□ □ □	□ □	$22 \div 10 =$
□ □ □	□ □ □	□ □	