

Multiplying and Dividing by 10 and 100 SET 1

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
			3	5	0		

350 x 10 =

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

3300 x 10 =

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

33.5 x 10 =

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

3.35 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

36×10 **Short cut for whole numbers** – add two zeros

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

<table><tr><th colspan="3">Thousands</th></tr><tr><th>H</th><th>T</th><th>O</th></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr></table>	Thousands			H	T	O							<table><tr><th colspan="3">Ones</th></tr><tr><th>H</th><th>T</th><th>O</th></tr><tr><td></td><td>3</td><td>5</td></tr><tr><td></td><td></td><td></td></tr></table>	Ones			H	T	O		3	5				<table><tr><th colspan="2">Parts of one</th></tr><tr><th>tenths</th><th>hundredths</th></tr><tr><td>t</td><td>h</td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr></table>	Parts of one		tenths	hundredths	t	h					$35 \times 100 =$
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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)

Thousands			Ones			Parts of one	
H	T	O	H	T	O	tenths	hundredths
				3	5		
$35 \div 10 =$							
Thousands			Ones			Parts of one	
H	T	O	H	T	O	tenths	hundredths
			5	3	0		
$530 \div 10 =$							
Thousands			Ones			Parts of one	
H	T	O	H	T	O	tenths	hundredths
					5	3	
$5.3 \div 10 =$							
Thousands			Ones			Parts of one	
H	T	O	H	T	O	tenths	hundredths
				5	5		
$55 \div 10 =$							
Thousands			Ones			Parts of one	
H	T	O	H	T	O	tenths	hundredths
			4	2	2		
$422 \div 10 =$							
Thousands			Ones			Parts of one	
H	T	O	H	T	O	tenths	hundredths
			4	1	5		
$415 \div 10 =$							