

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
					3	t	h
				3	6	6	

$3.6 \times 10 = 36$

$$3.6 \times 10 = 36$$

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

<table border="1"><thead><tr><th colspan="3">Thousands</th><th colspan="3">Ones</th><th colspan="2">Parts of one</th></tr><tr><th>H</th><th>T</th><th>O</th><th>H</th><th>T</th><th>O</th><th>tenths</th><th>hundredths</th></tr></thead><tbody><tr><td> </td><td> </td><td> </td><td>4</td><td>5</td><td>0</td><td>t</td><td>h</td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr></tbody></table>	Thousands			Ones			Parts of one		H	T	O	H	T	O	tenths	hundredths				4	5	0	t	h																	$450 \times 10 =$	
Thousands			Ones			Parts of one																																				
H	T	O	H	T	O	tenths	hundredths																																			
			4	5	0	t	h																																			
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Thousands			Ones			Parts of one																																				
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Thousands			Ones			Parts of one																																				
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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	t	h
				3	6	6	
				0			

$3.6 \times 100 = 360$

$3.6 \times 100 = 360$ 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.

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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

<table border="1"><thead><tr><th colspan="3">Thousands</th></tr><tr><th>H</th><th>T</th><th>O</th></tr></thead><tbody><tr><td>■■■</td><td>■■■</td><td>■■■</td></tr><tr><td>■■■</td><td>■■■</td><td>■■■</td></tr><tr><td>■■■</td><td>■■■</td><td>■■■</td></tr></tbody></table>	Thousands			H	T	O	■■■	■■■	■■■	■■■	■■■	■■■	■■■	■■■	■■■	<table border="1"><thead><tr><th colspan="3">Ones</th></tr><tr><th>H</th><th>T</th><th>O</th></tr></thead><tbody><tr><td>■■■</td><td>3</td><td>9</td></tr><tr><td>■■■</td><td>■■■</td><td>■■■</td></tr><tr><td>■■■</td><td>■■■</td><td>■■■</td></tr></tbody></table>	Ones			H	T	O	■■■	3	9	■■■	■■■	■■■	■■■	■■■	■■■	<table border="1"><thead><tr><th colspan="2">Parts of one</th></tr><tr><th>tenths</th><th>hundredths</th></tr></thead><tbody><tr><td>■</td><td>■</td></tr><tr><td>■</td><td>■</td></tr><tr><td>■</td><td>■</td></tr></tbody></table>	Parts of one		tenths	hundredths	■	■	■	■	■	■	$39 \div 10 =$
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