

Teacher Notes

The essence of this activity is for students to understand how, when multiplying or dividing by powers of 10, it's the digits that move rather than the decimal point. By physically transforming the numbers, the students will appreciate how the decimal point stays static.

Each student has one train (laminated) and a copy of the place value sheet. As the teacher asks a question, then the students write the number on their train with a whiteboard pen. They use the train to calculate the answer which they then write on their place value sheet. If you have the time, making a hole between each carriage (with a hole punch) enables the decimal point on the place value grid to be seen.

On page 4 there are three examples to be projected on an interactive whiteboard. The trains can be moved on top of the number grids and then slid from side to side to demonstrate multiplying and dividing. The digits on the trains can be changed if required.

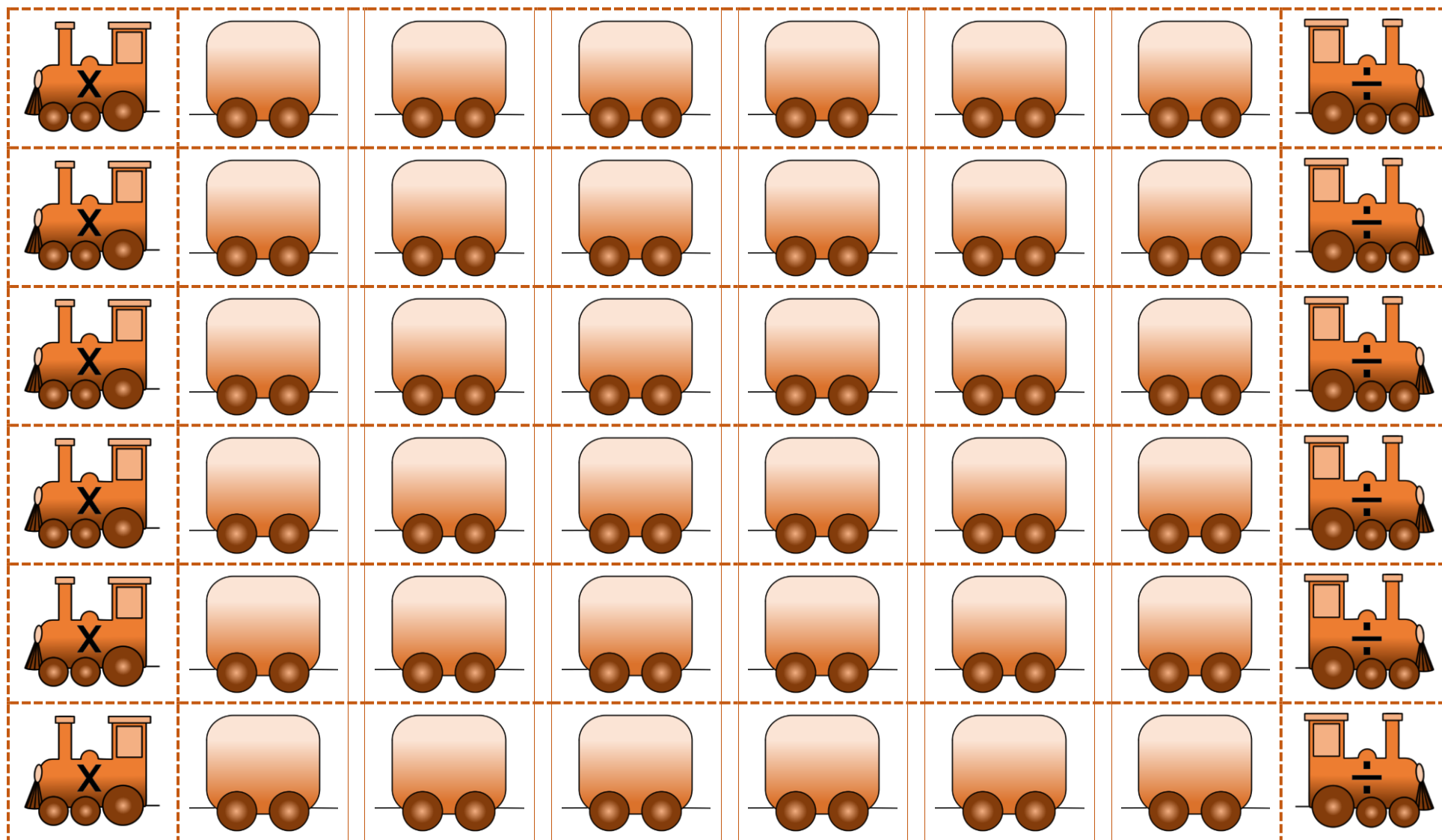
Sample questions

These are given to show the magnitude of the numbers that can be used in this activity and the calculations that can be done with them.

You can insert your own digits as appropriate.

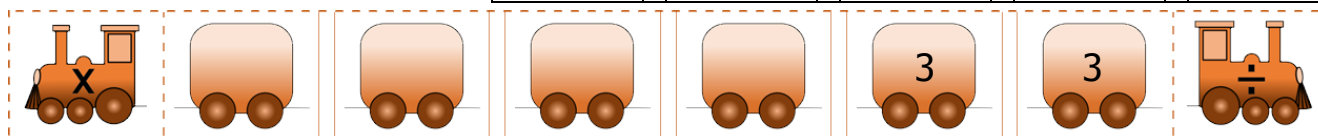
3×10	$3 \div 10$	3.3×10	$3.3 \div 10$	3.33×10	$3.33 \div 10$	3.333×10	
3×100	$3 \div 100$	3.3×100	$3.3 \div 100$	3.33×100		3.333×100	
3×1000	$3 \div 1000$	3.3×1000		3.33×1000		3.333×1000	
33×10	$33 \div 10$	33.3×10	$33.3 \div 10$	33.33×10	$33.33 \div 10$	33.333×10	
33×100	$33 \div 100$	33.3×100	$33.3 \div 100$	33.33×100		33.333×100	
	$33 \div 1000$						
333×10	$333 \div 10$	333.3×10	$333.3 \div 10$	333.33×10	$333.33 \div 10$	333.333×10	
	$333 \div 100$		$333.3 \div 100$				
	$333 \div 1000$						
	$3333 \div 10$		$3333.3 \div 10$		$3333.33 \div 10$		
	$3333 \div 100$		$3333.3 \div 100$				
	$3333 \div 1000$						

Question number	TH	H	T	U	.	t	h	th
1					.			
2					.			
3					.			
4					.			
5					.			
6					.			

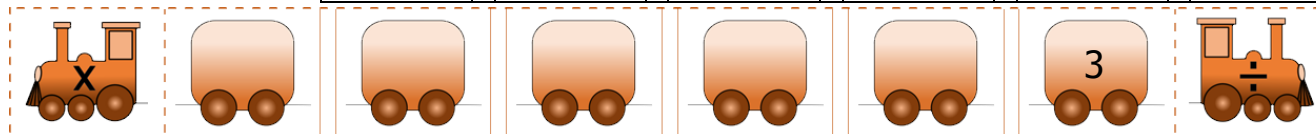


Examples

TH	H	T	U	.	t	h	th
				.			



TH	H	T	U	.	t	h	th
				.			



TH	H	T	U	.	t	h	th
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