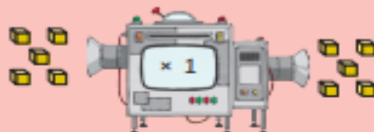
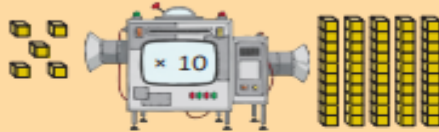
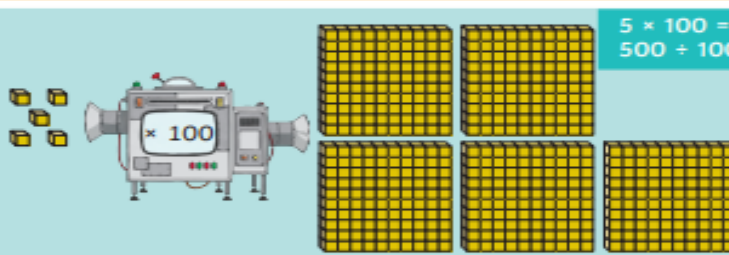



Multiplication and Division													Knowledge Organiser																																																											
Key Vocabulary		Multiplication and Division Facts												Use Place Value to Multiply and Divide Mentally																																																										
multiply	x	1	2	3	4	5	6	7	8	9	10	11	12	<div><div>5 × 1 = 5 5 ÷ 1 = 5</div></div>																																																										
groups of	1	1	2	3	4	5	6	7	8	9	10	11	12																																																											
lots of	2	2	4	6	8	10	12	14	16	18	20	22	24	<div><div>5 × 10 = 50 50 ÷ 10 = 5</div></div>																																																										
	3	3	6	9	12	15	18	21	24	27	30	33	36																																																											
times	4	4	8	12	16	20	24	28	32	36	40	44	48	<div><div>5 × 100 = 500 500 ÷ 100 = 5</div></div>																																																										
	5	5	10	15	20	25	30	35	40	45	50	55	60																																																											
divide	6	6	12	18	24	30	36	42	48	54	60	66	72																																																											
	7	7	14	21	28	35	42	49	56	63	70	77	84																																																											
share	8	8	16	24	32	40	48	56	64	72	80	88	96																																																											
	9	9	18	27	36	45	54	63	72	81	90	99	108																																																											
remainder	10	10	20	30	40	50	60	70	80	90	100	110	120																																																											
	11	11	22	33	44	55	66	77	88	99	110	121	132																																																											
	12	12	24	36	48	60	72	84	96	108	120	132	144																																																											
factor		Factor pairs and Commutativity						Multiply Using Formal Written Methods						<div>Remember to move any regrouped numbers into the next column. After the next multiplication, add the regrouped number to the answer.</div>																																																										
multiple	<div><div>The factors of 20 are 1, 2, 4, 5, 10 and 20.</div><div>The factor pairs are:</div><div>1 and 20 2 and 10 4 and 5</div></div> <div><div>5 × 4 = 20</div><div>4 × 5 = 20</div></div>						<div><table><tr><td>Th</td><td>H</td><td>T</td><td>O</td></tr><tr><td></td><td>5</td><td>4</td><td>3</td></tr><tr><td>x</td><td></td><td></td><td>4</td></tr><tr><td></td><td></td><td>1</td><td>2</td></tr><tr><td></td><td>1</td><td>6</td><td>0</td></tr><tr><td>2</td><td>0</td><td>0</td><td>0</td></tr><tr><td>2</td><td>1</td><td>7</td><td>2</td></tr></table><div>(4 × 3) (4 × 40) (4 × 500)</div></div>						Th			H	T	O		5	4	3	x			4			1	2		1	6	0	2	0	0	0	2	1	7	2	<div><table><tr><td>Th</td><td>H</td><td>T</td><td>O</td></tr><tr><td></td><td>5</td><td>4</td><td>3</td></tr><tr><td>x</td><td></td><td></td><td>4</td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td>2</td><td>1</td><td>7</td><td>2</td></tr><tr><td></td><td>1</td><td>1</td><td></td></tr></table></div>						Th	H	T	O		5	4	3	x			4					2	1	7	2		1	1	
Th	H	T	O																																																																					
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Year 4																																																																								

Multiplication and Division

Knowledge Organiser

Mental Calculations for Solving Problems

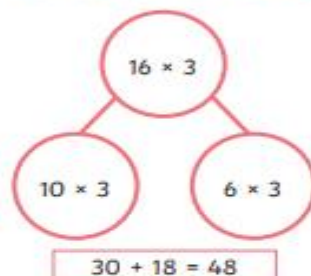
$$(2 \times 3) \times 4 = 24$$



$$(2 \times 4) \times 3 = 24$$



$$(3 \times 4) \times 2 = 24$$



Integer Scaling Problems

10 pencils



$10 \times 4 = 40$ pencils



75g



$75g \times 2 = 150g$



Short Division with Exact Answers

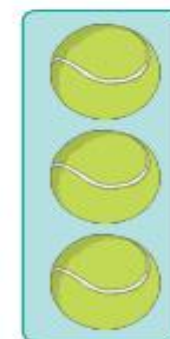
There are 69 tennis balls packed in tubes of 3.

There are 23 tubes altogether.

$$69 \div 3 = 23$$

$$\begin{array}{r} 23 \\ 3 \overline{) 69} \end{array}$$

69		
23	23	23



Year 4