

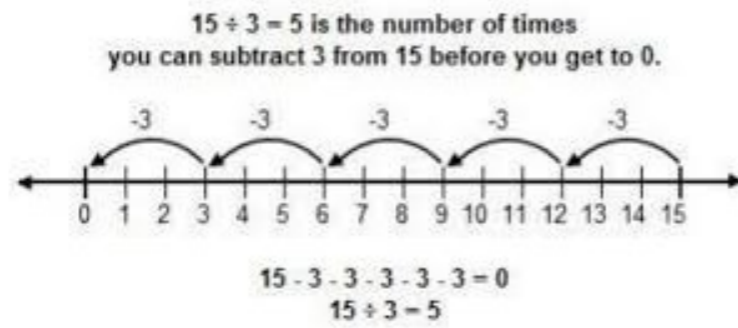
Year 3	Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects.
Year 4	Recall multiplication and division facts for multiplication tables up to 12×12 Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers Recognise and use factor pairs and commutativity in mental calculations Multiply two-digit and three-digit numbers by a one-digit number using formal written layout Solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects.

Vocabulary

Multiply, times, lots of, groups of, product, repeated addition
Divide, share equally, group, remainder

Strategies

Multiplication: Arrays, repeated addition on number line, grid method, expanded column method (with place value headings and brackets for support)
Division: Sharing with manipulatives, grouping as repeated subtraction on a number line, chunking



73 ÷ 5

5	73	
	- 50	(10 × 5)
	23	
	- 20	(4 × 5)
	3	

10 + 4 = 14

How many 5s have been subtracted?
14 sets of 5, with 3 left over.
Answer: 73 ÷ 5 = 14 r3

×	30	5
7	210	35

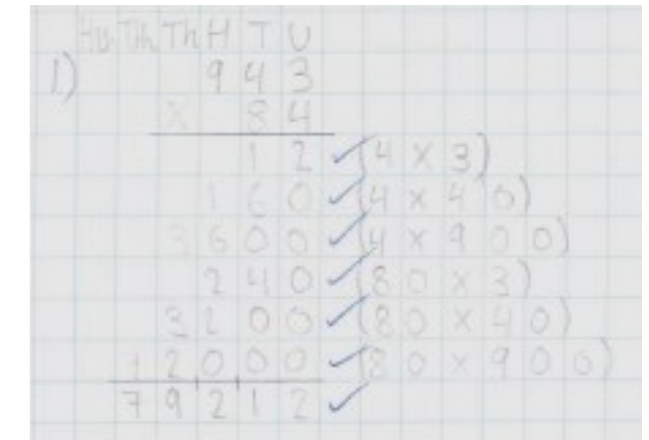
210 + 35 = 245

123 × 5

×	100	20	3
5	500	100	15

**500
+ 100
+ 15

615**



Mastery
Complete the following: $3 \times \square = 12$ $4 \times \square = 20$ $\square \times 3 = 15$ $8 \times \square = 24$
Use a column method to calculate the following: 123×3 324×4 234×8

Mastery with Greater Depth																																			
$\square \square \times \square = ?$ Putting the digits 1, 2 and 3 in the empty boxes, how many different calculations can you make? Which one gives the largest answer? Which one gives the smallest answer?																																			
Find the missing digits. <table style="display: inline-table; margin-right: 20px;"> <tr><td style="text-align: right;">2</td><td style="border: 1px solid black; width: 20px; height: 20px;"></td></tr> <tr><td style="text-align: right;">×</td><td style="border: 1px solid black; width: 20px; height: 20px;"></td></tr> <tr><td style="text-align: right;">1</td><td style="border: 1px solid black; width: 20px; height: 20px;"></td></tr> <tr><td style="text-align: right;">7</td><td style="border: 1px solid black; width: 20px; height: 20px;"></td></tr> <tr><td style="text-align: right;">6</td><td style="border: 1px solid black; width: 20px; height: 20px;"></td></tr> </table> <table style="display: inline-table; margin-right: 20px;"> <tr><td style="text-align: right;">2</td><td style="border: 1px solid black; width: 20px; height: 20px;"></td></tr> <tr><td style="text-align: right;">×</td><td style="border: 1px solid black; width: 20px; height: 20px;"></td></tr> <tr><td style="text-align: right;">1</td><td style="border: 1px solid black; width: 20px; height: 20px;"></td></tr> <tr><td style="text-align: right;">1</td><td style="border: 1px solid black; width: 20px; height: 20px;"></td></tr> <tr><td style="text-align: right;">2</td><td style="border: 1px solid black; width: 20px; height: 20px;"></td></tr> </table> <table style="display: inline-table;"> <tr><td style="text-align: right;">1</td><td style="border: 1px solid black; width: 20px; height: 20px;"></td><td style="border: 1px solid black; width: 20px; height: 20px;"></td></tr> <tr><td style="text-align: right;">×</td><td style="border: 1px solid black; width: 20px; height: 20px;"></td><td style="border: 1px solid black; width: 20px; height: 20px;"></td></tr> <tr><td style="text-align: right;">7</td><td style="border: 1px solid black; width: 20px; height: 20px;"></td><td style="border: 1px solid black; width: 20px; height: 20px;"></td></tr> <tr><td style="text-align: right;">3</td><td style="border: 1px solid black; width: 20px; height: 20px;"></td><td style="border: 1px solid black; width: 20px; height: 20px;"></td></tr> <tr><td style="text-align: right;">6</td><td style="border: 1px solid black; width: 20px; height: 20px;"></td><td style="border: 1px solid black; width: 20px; height: 20px;"></td></tr> </table>	2		×		1		7		6		2		×		1		1		2		1			×			7			3			6		
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Mastery			
Three children calculated 7×6 in different ways. Identify each strategy and complete the calculations. <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; padding: 5px; width: 33%;"> Annie $7 \times 6 = 7 \times 5 + \square$ $= \square$ </td> <td style="border: 1px solid black; padding: 5px; width: 33%;"> Bertie $7 \times 6 = 7 \times 7 - \square$ $= \square$ </td> <td style="border: 1px solid black; padding: 5px; width: 33%;"> Cara used the commutative law $7 \times 6 = \square \times \square$ $= \square$ </td> </tr> </table>	Annie $7 \times 6 = 7 \times 5 + \square$ $= \square$	Bertie $7 \times 6 = 7 \times 7 - \square$ $= \square$	Cara used the commutative law $7 \times 6 = \square \times \square$ $= \square$
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Now find the answer to 6×9 in three different ways.			
Tom ate 9 grapes at the picnic. Sam ate 3 times as many grapes as Tom. How many grapes did they eat altogether?			

Mastery with Greater Depth				
Multiply a number by itself and then make one factor one more and the other one less. What happens to the product? E.g. <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">$4 \times 4 = 16$</td> <td style="width: 50%;">$6 \times 6 = 36$</td> </tr> <tr> <td>$5 \times 3 = 15$</td> <td>$7 \times 5 = 35$</td> </tr> </table>	$4 \times 4 = 16$	$6 \times 6 = 36$	$5 \times 3 = 15$	$7 \times 5 = 35$
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What do you notice? Will this always happen?				
Sally has 9 times as many football cards as Sam. Together they have 150 cards. How many more cards does Sally have than Sam?				