



Multiplication and Division



Lesson sequence

- Multiplying 4 digit by 1 digit
- Multiplying 2 digit by 2 digit
- Multiplying 3 digit by 2 digit
- Multiplying 4 digit by 2 digit
- Solve world problems with multiplication
 - Short division
- Divide a 4 digit number by a 1 digit number
 - Divide with remainders
 - Efficient division
- Solve world problems with multiplication and division

Vocabulary revision

- *Divide*
- *Multiply*
- *Exchange*
- *Thousands*
- *Partition*
- *Remainder*
- *Decimal*
- *Ten of thousands*
- *Integer*
- *Digit*
- *Place value*
- *Factors*
- *Multiples*

Sticky learning

New Knowledge

- *To know the formal written method of division*
- *To know the formal written method of long multiplication*
- *To know that a remainder is the amount left over when a number cannot be exactly divided by another number*
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New Skills

- *To multiply and divide numbers mentally drawing upon known facts*
- *To multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers*
- *To divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context*
- *To solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes*

New vocabulary I will learn

- Place value holder
- Long multiplication
- Short division
 - Efficient
- Area model

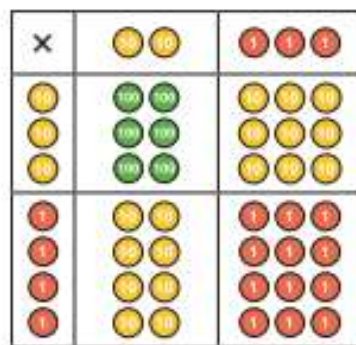
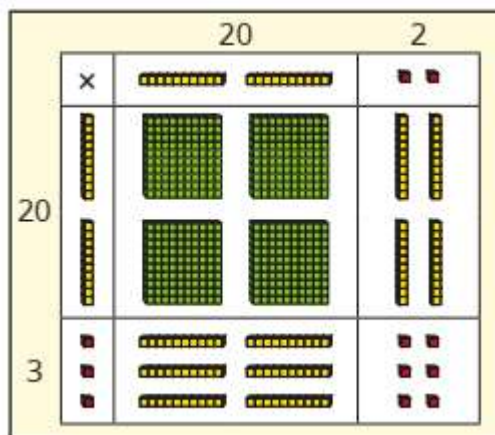


Pictorial representations

×	10	3
30	300	90
2	20	6

$$300 + 90 + 20 + 6 = 416$$

			3	2	
×			1	3	
			9	6	
		3	2	0	
		4	1	6	
		1			



Concept Links/Prior Knowledge

- To know the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones)
- To identify, represent and estimate numbers using different representations
- To solve number and practical problems that involve all of the above and with increasingly large positive numbers.
- Use mental methods and extend this to three-digit numbers to derive facts, (for example $600 \div 3 = 200$ can be derived from $2 \times 3 = 6$)
- To use knowledge of number facts and rules of arithmetic to solve mental and written calculations for example, $2 \times 6 \times 5 = 10 \times 6 = 60$
- To recall multiplication and division facts for multiplication tables up to 12×12 including the six, seven and nine times tables
- To know the formal written method for multiplication
- To know the formal written method of division
- To know that multiplying a number by a group of numbers added together is the same as doing each multiplication separately (distributive law)
- To multiply two-digit and three-digit numbers by a one-digit number using formal written layout