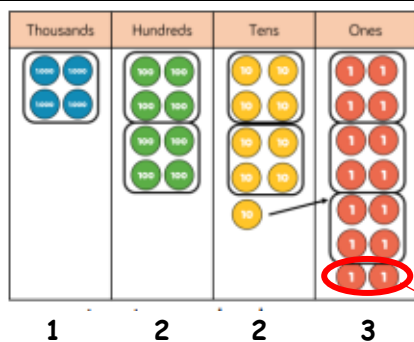


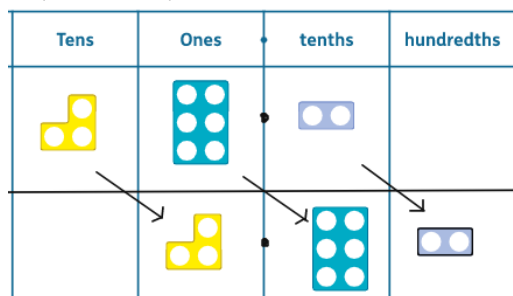
YEAR 5	Division																																					
Vocabulary: common factors, prime number, prime factors, composite numbers, short division, square number, cube number, inverse, power of. (see previous year groups)																																						
Concrete	Pictorial	Abstract																																				
Divide numbers up to 4 digits by a one-digit number (no remainders) (start with 4d ÷ 1d no exchanging e.g. 4848 ÷ 4) 4892 ÷ 4 = 1223 <table><tr><td>Thousands</td><td>Hundreds</td><td>Tens</td><td>Ones</td></tr><tr><td> 4 8 4 8 </td><td> 4 8 4 8 </td><td> 4 8 4 8 </td><td> 4 8 4 8 </td></tr></table> <table><tr><td>Thousands</td><td>Hundreds</td><td>Tens</td><td>Ones</td></tr><tr><td> 4 8 4 8 </td><td> 4 8 4 8 </td><td> 4 8 4 8 </td><td> 4 8 4 8 </td></tr></table> 1 2 2 3	Thousands	Hundreds	Tens	Ones	4 8 4 8	4 8 4 8	4 8 4 8	4 8 4 8	Thousands	Hundreds	Tens	Ones	4 8 4 8	4 8 4 8	4 8 4 8	4 8 4 8	Divide numbers up to 4 digits by a one-digit number (no remainders)	Divide numbers up to 4 digits by a one-digit number (no remainders) 4892 ÷ 4 <table><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td>1</td><td>2</td><td>2</td><td>3</td></tr><tr><td>4</td><td>4</td><td>8</td><td>9</td><td>2</td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr></table>							1	2	2	3	4	4	8	9	2					
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Divide numbers up to 4 digits by a one-digit number (with remainders) Display remainder in different ways e.g. r 4 or $\frac{4}{5}$ In some examples, recognise some simple decimals e.g. if quotient is $23\frac{3}{4}$, recognise it can also be expressed as 23.75 4892 ÷ 4 = 1223	Divide numbers up to 4 digits by a one-digit number (with remainders)	Divide numbers up to 4 digits by a one-digit number (with remainders) Divide numbers up to 4 -digits by a 1-digit number using a formal written method (short division) and interpret remainders appropriately for the context 4892 ÷ 4 = 1223																																				



Divide whole numbers and those involving decimals by 10, 100 and 1000

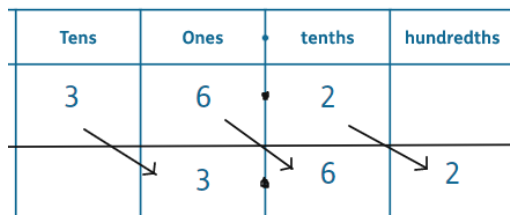
Numicon/place value counters:

$$36.2 \div 10 = 3.62$$



Divide whole numbers and those involving decimals by 10, 100 and 1000

$$36.2 \div 10 = 3.62$$



	1	2	2	3	
4	4	8	9	4	r2

Divide whole numbers and those involving decimals by 10, 100 and 1000

No written method - mental method only.

Mental Methods

Number facts

Count regularly using a range of multiples, and powers of 10, 100 and 1000, building fluency.

Practice and apply the multiplication facts to 12×12 .

Use knowledge of counting in multiples to counting in decimal steps (one decimal place).

0.6 1.2 1.8 2.4

Derive corresponding halves of doubles of decimals (to 1 place) using knowledge of place value.

Half of 0.4 = 0.2 $3.6 \div 2 = 1.8$

Continue to recall division facts for multiplication tables to 12×12 fluently and derive and use related facts:

560 divided by 7 divide 2.1 by 7

4500 $\div$ 5, what is the quotient?

3.2 divided by 4

Identify multiples and factors and common factors of two numbers and primes.

list the multiples of 9 between 150 and 180 (using tests of divisibility)

Using known facts and place value

$8.4 \div 7$ (multiply dividend by 10, then divide quotient by 10) $84 \div 7 = 12$, $12 \div 10 = 1.2$

Mental methods and jottings

Divide mentally drawing upon known number facts.

Use factors to construct equivalence statements.

Begin to divide tenths and 1-digit whole numbers and tenths by 1-digit whole numbers.

Partitioning

Using distributive law:

$546 \div 6$

$(540 \div 6 = 90; 6 \div 6 = 1 \text{ so } 90 + 1 = 91)$

With Jottings

$24.5 \div 7$

$21 \div 7 = 3; 3.5 \div 7 = 0.5$

so $3 + 0.5 = 3.5$

Continue to partition number in different ways:

$762 = 700 + 60 + 2;$

$762 = 600 + 120 + 42 \text{ etc}$

Doubling and halving

$14.8 \div 4$ (halve and halve again)

Half of 14.8 = 7.4; half of 7.4 = 3.7

With jottings:

$3800 \div 50$ (divide by 100 then double)

$3800 \div 100 = 38; \text{ double } 38 = 76.$

Factors

$84 \div 20$ (halve and divide by 10)

$84 \div 2 = 42$ then $42 \div 10 = 4.2$

With jottings

$150 \div 6$

$(150 \div 3 = 50 \text{ then } 50 \div 2 = 25).$

Estimating

Use rounding to check answers to calculation and determine, in the context of a problem, levels of accuracy:

$256 \div 12$ is approximately $2560 \div 10$.

Continue to use appropriate strategies to check answers:

Check $860 \div 9$ by using the inverse.

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