Autumn term
Spring term
Summer term

Year 5

NCETM
NATIONAL CENTRE FOR EXCELLENCE IN THE TEACHING OF MATHEMATICS

Apply scaling by 10, 100, $\frac{1}{10}$ or $\frac{1}{100}$ to known facts.

Multiples of 4	NOT multiples of 4
92 ✓	91 ✓
82 ✗	80 ✗
100 ✓	106 ✓
602 ✗	799 ✓
43 ✗	74 ✓
987,300 ✓	859,433 ✓

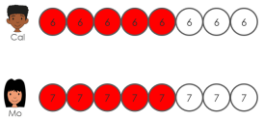
$38 \div 3 = 12 \text{ r } 2$

$38 \div 3 = \frac{38}{3} = 12\frac{2}{3}$

$9 \times 12 = 108$
$90 \times 12 = 1080$
$1080 \div 12 = 90$
$1080 \div 90 = 12$

Understand how the product changes when one of the factors increases or decreases by 1.

Understand and use divisibility rules to include sorting and classifying improper fractions into those that give a whole number quotient and those that do not.

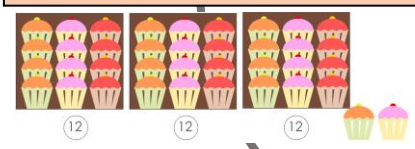


Explore multiplicative composition.

A $14 \times 3 = 2 \times (7 \times 3) = \square$

B $14 \times 3 = (2 \times 3) \times 7 = \square$

Explore contexts where you can use either a multiplication and addition equation or a division equation with a remainder.



$38 = 3 \times 12 + 2$
$38 \div 3 = 12 \text{ r } 2$
$38 \div 12 = 3 \text{ r } 2$

Explore a constant (functional) relationship using a ratio table.

The number of legs is **ALWAYS** 8 times the number of spiders.

Number of spiders	1
Number of legs	8

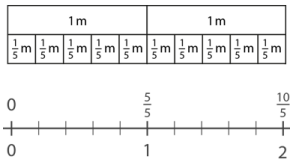
× 8

Find a unit fraction of a number and connect this to partitive and quotitive division.



$120\text{cm} \times \frac{1}{2} = \square$

$120\text{cm} \div 2 = \square$



$5 \times \frac{1}{5} = \frac{5}{5} = 1 \quad 10 \times \frac{1}{5} = \frac{10}{5} = 2$

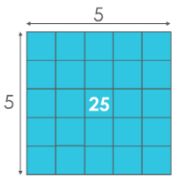
÷ 10

Length in m	6	60

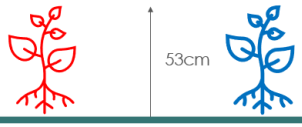
× $\frac{1}{10}$

Length in m		60

Connecting multiplying by $\frac{1}{10}$ to dividing by 10 and multiplying by $\frac{1}{100}$ to dividing by 100.



$5 \times 5 = 25$

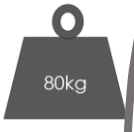


When a number is multiplied by 1 it stays the same.

× 10

Number of vases	1	10
Number of flowers	5	50

× 10



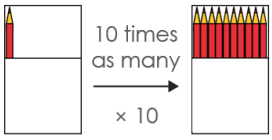
80kg is 10 times 8kg.

8kg

Explore a scalar relationship using a ratio table and when multiplying by 10 or 100.

Practise facts: where the factors are the same, resulting in a product that is a square number; where 1 is a factor; where 10 is a factor.

Make connections between multiplication and division contexts and equations.

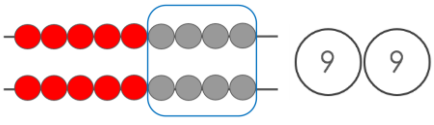


Recap when 2 is a factor.



The value of the product in a multiplication equation becomes the value of the dividend in the corresponding division equation.

To multiply a whole number by 10, place a zero after the final digit of that number.



$2 \times 9 = 18$
$9 \times 2 = 18$