

Recall of facts

Learn and recall multiplication and division facts up to 12×12 and use place value to derive related facts

$6 \times 7 = 42$ $70 \times 6 = 420$ $42 \div 6 = 7$
 $420 \div 6 = 70$ Divide 63 by 7
 350 divided by 5
 How many sixes in 54?
 $108 \div 12$ – what is the quotient?

Continue to use the inverse relationship between x and ÷

$8 \times 7 = 56$ $56 = 7 \times 8$
 $56 \div 8 = 7$ $8 = 56 \div 7$

Relate division and fractions

$\frac{1}{8}$ of 56 is the same as $56 \div 8$
 $\frac{3}{7}$ of 56 is the same as $(56 \div 7) \times 3$

56							
$\frac{1}{7}$	$\frac{1}{7}$	$\frac{1}{7}$	$\frac{1}{7}$	$\frac{1}{7}$	$\frac{1}{7}$	$\frac{1}{7}$	$\frac{1}{7}$
8	8	8	8	8	8	8	8

Multiplication and division can be represented in different ways...

These structures show the relationship between multiplication and division.

38×4

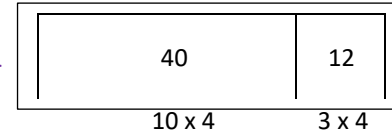
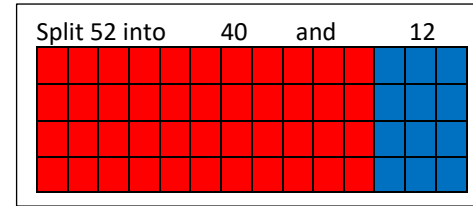
x	30			8
	10x4	10x4	10x4	
4	*****	*****	*****	*****
	*****	*****	*****	*****
	*****	*****	*****	*****
	*****	*****	*****	*****

X	30	8
4	120	32

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      3 8
    x   4
    ----
    1 2 0 (30x4)
    3 2   (8x4)
    ----
    1 5 2
    
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$52 \div 4$



$4 \overline{) 103} = 13$
 $4 \overline{) 4012}$

$4 \overline{) 13} = 3 \text{ r } 1$
 $4 \overline{) 512}$

Always Sometimes Never?

Numbers in the nine times table have digits that add up to 9

Year 4 Multiplication and Division (including fractions)

Prove it

Multiples of 6 are also multiples of 2 and of 3

Partition numbers for division by using factors

$161 \div 7$ - partition 159 into 140 and 21
 Use times tables knowledge to know that 140 is divisible by 7 – 20×7
 21 is divisible by 7 – 3×7

Calculating with measures

6 pens cost £2.40 How much does each pen cost?

£2.40					
?	?	?	?	?	?

Using knowledge of times tables, I know that $240 \div 6 = 40$ linked to $24 \div 6$

Therefore $£2.40 \div 6 = 40p$ for each pen.

Use the inverse operation to check $40p \times 6 = £2.40$

How many rectangles can you draw with an area of 36cm^2 ?

Mark is doing a sponsored silence. He says, "If I am silent for five hours at 10p per minute I will raise 50 pounds." Is he correct? Prove it

Use a variety of words

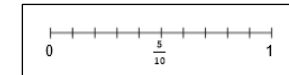
multiple, multiply, array, tables, times, product, twice, double, repeated addition, factor, divide, divisible by, divided into, quotient, divisor, remainder

Equivalence

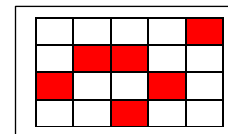
$\frac{3}{10}$ of a number. Divide the whole number into 10 equal parts then x by 3

$\frac{3}{10}$ written as a decimal – 0.3

Mark $\frac{3}{10}$ on a number line

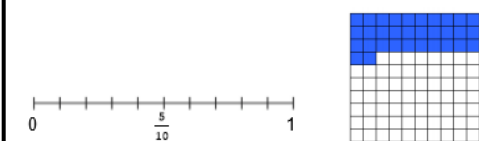


$\frac{3}{10}$ of a shape



Fractions and decimals

Counting in tenths $\frac{1}{10}$ 0.1 and hundredths $\frac{1}{100}$ 0.01



Scaling – linking x and ÷

For every flower, there are 6 leaves

Flower	1	2	3??
Leaves	6	?	?	42	60