

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 \times and \div

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

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...

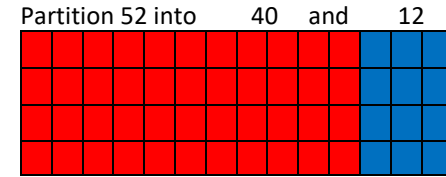
These structures show the relationship between multiplication and division.

38×4

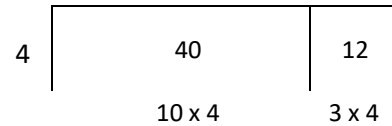
x	30			8
	10x4	10x4	10x4	
4	*****	*****	*****	*****
	*****	*****	*****	*****
	*****	*****	*****	*****
	*****	*****	*****	*****

X	30	8
4	120	32

$$\begin{array}{r} 38 \\ \times 4 \\ \hline 320 \\ 152 \\ \hline 152 \end{array}$$



$52 \div 4$



$$4 \overline{) 52} = 13$$

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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 including 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 the correct vocabulary

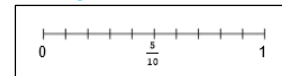
multiple, multiply, array, tables, times, product, twice, double, repeated addition, factor
 divide, divisible by, divided into, quotient, divisor, remainder

Equivalence

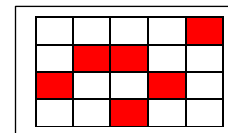
$\frac{3}{10}$ of a number. Divide the whole number into 10 equal parts then \times by 3

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

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

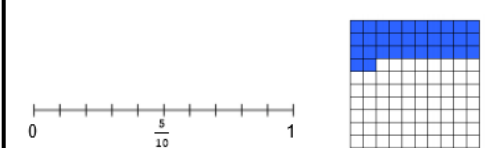


$\frac{3}{10}$ of a shape



Fractions and decimals

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



Scaling – linking \times and \div

For every flower, there are 6 leaves

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