Year 5

Vocabulary

Add
sum
plus
combined
total
increase
altogether
more

Addition

Place Value Table

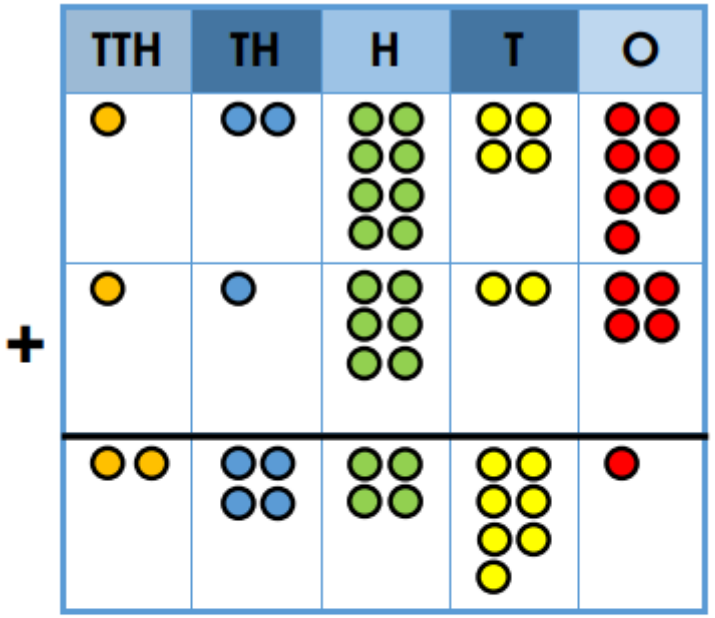
232 + 29 = 261

H	T	O
100 100	10 10 10 10 10	1 1 1 1 1 1 1 1 1 1 1

If we have more than 10, we exchange counters.

H	T	O
100 100	10 10 10 10 10 10	1

Written Method



	1	2	8	4	7
+	1	1	6	2	4
	2	4	4	7	1
		1		1	

Year 5

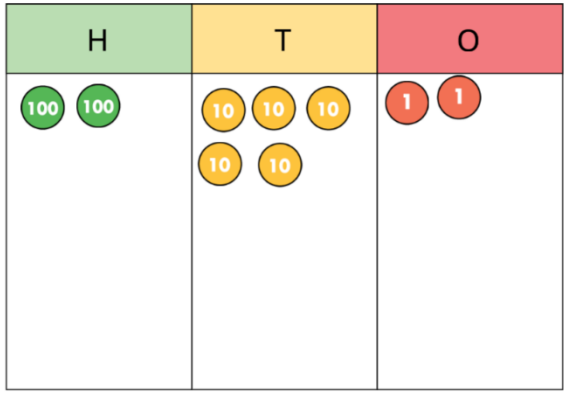
Vocabulary

subtract
minus
decrease
reduce
take away
difference
less
fewer

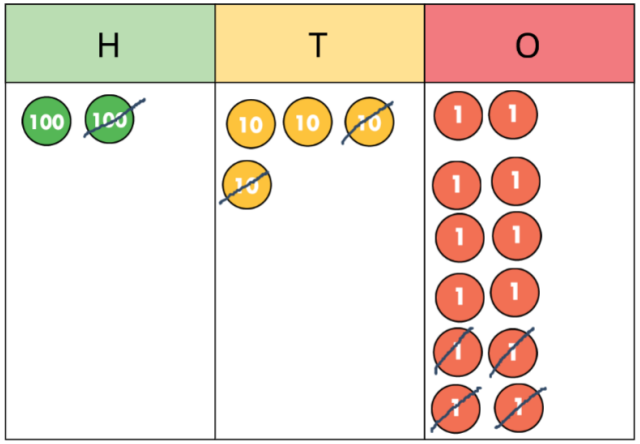
Subtraction

Place Value Counters

252 – 124 =



If we can't takeaway we exchange.



Ten Frame

	2	1	4	6 ~~7~~	12
-		2	2	4	4
				2	8

If we can't takeaway we exchange.

	1 ~~2~~	11	4	6 ~~7~~	12
-		2	2	4	4
	1	9	2	2	8

Year 5

Vocabulary

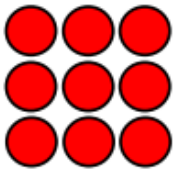
Multiply
Times
Double
Count in
—
Equal groups
Product of

Multiplication and Division

Square Numbers

When square numbers are represented in an array, it forms a square shape.

$3^2 = 3 \times 3 = 9$



$2^2 = 2 \times 2 = 4$ $\quad$ $3^2 = 3 \times 3 = 9$

$4^2 = 4 \times 4 = 16$ $\quad$ $5^2 = 5 \times 5 = 25$

Cube Numbers

A cube number is a number that has been multiplied by itself then multiplied by itself again. The symbol to show this is ³.

$2^3 = 2 \times 2 \times 2 = 8$ $\quad$ $3^3 = 3 \times 3 \times 3 = 27$

$4^3 = 4 \times 4 \times 4 = 64$ $\quad$ $5^3 = 5 \times 5 \times 5 = 125$

Times and Divide by 10, 100 and 10000

The empty place value spaces are filled with a **0 as a place holder.**

TH	H	T	O
	4	2	3
	100 100 100	10 10	1 1 1
100 100 100	10 10	1 1 1	0

x10

423 x 10 = 4,230

When a number is divided by 10, 100 or 1,000, the digits move to the right in the place value column: **1 place** when dividing by 10, **2 places** to divide by 100 and **3 places** to divide by 1,000.

Look what happens when we divide 7,900 by 10, 100 and 1,000:

TH	H	T	O	.	t	
7	9	0	0			
	7	9	0			÷10
		7	9			÷100
			7	.	9	÷1,000

Year 5

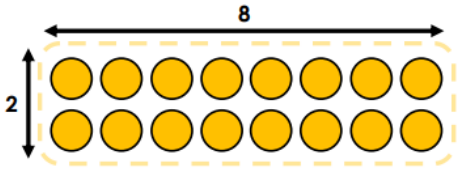
Vocabulary

Divide
Share
Count in
—
Equal groups of...

Division

Factors

Factors are the numbers that multiply together to make a product.



2 × 8 = 16

factor factor product

Common Factors

Factors of 8	Factors of 28
1 ✓	1 ✓
2 ✓	2 ✓
4 ✓	4 ✓
8	7
	14
	28

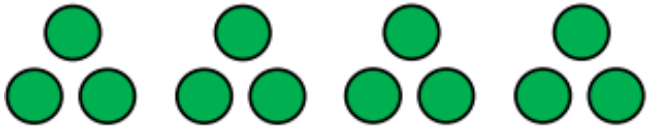
The common factors of **8** and **28** are **1**, **2** and **4**.

Written Methods

	0	2	1
6	1	$^{1}2$	6

Multiples

Multiples are the result of multiplying two numbers together. They can be seen as extended times tables.



1 x3 = 3 2 x 3 =6 3 x 3 =9 4 x 3 = 12

Year 5

Vocabulary

Equal parts
Groups
Divide
Equivalent
Numerator
Denominator

Fractions

Addition

When we **add fractions** with **different denominators**, we need to find a common denominator.

$\frac{1}{6}$ + $\frac{5}{12}$

$\frac{1}{6} = \frac{2}{12}$

$\frac{2}{12} + \frac{5}{12} = \frac{7}{12}$

Mulitplication

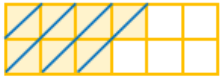
$2 \times 5 = 10$

$\frac{4}{9} \times 5 = \frac{20}{9} = 2\frac{2}{9}$

$10 + 2\frac{2}{9} = 12\frac{2}{9}$

Subtraction

$1\frac{7}{12} - \frac{3}{4} = 1\frac{7}{12} - \frac{9}{12}$



$1\frac{7}{12} - \frac{9}{12} = \frac{19}{12} - \frac{9}{12} = \frac{10}{12}$

Fraction of an Amount

$\frac{1}{8}$ of 24 = 3