

YR3 ADDITION AND SUBTRACTION KNOWLEDGE ORGANISER

Key Concepts

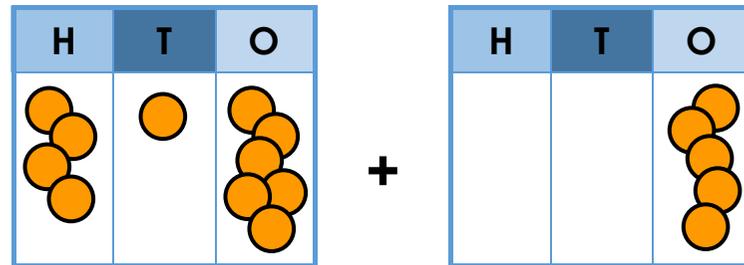
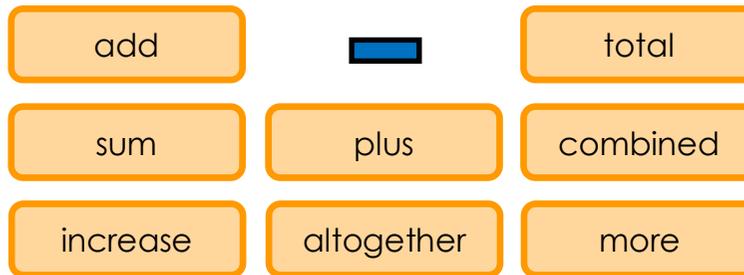
- Add and subtract multiples of 100
- Add and subtract numbers mentally
- Add and subtract numbers using formal written methods

Key Vocabulary

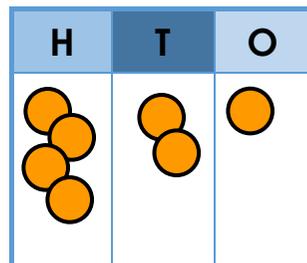
- add/addition
- subtract/subtraction
- calculate/calculation
- mental calculation
- written method
- operation
- total
- amount
- exchange
- regroup



Addition

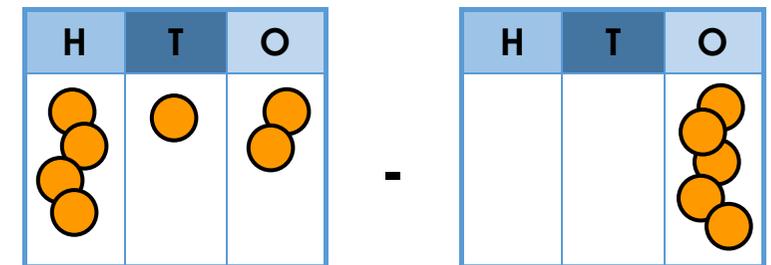
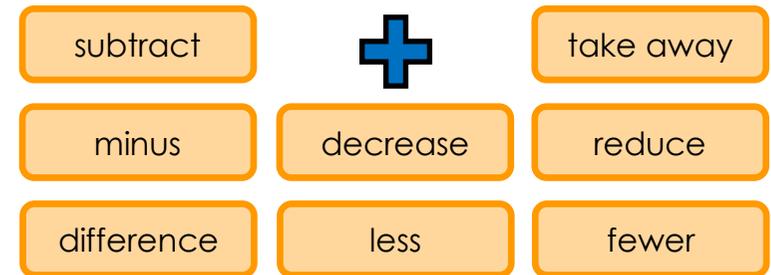


The counters in these place value charts show the calculation $416 + 5$. If we just add both sets of ones counters together, we will have 11 ones counters. 11 ones is then exchanged into a ten and a one.

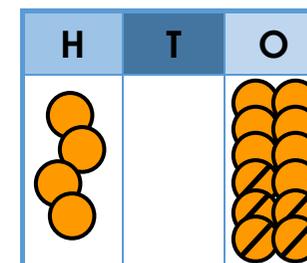


$$416 + 5 = 421$$

Subtraction



The counters in these place value charts show the calculation $412 - 5$. In the ones columns, we can not take 5 away from 2 so we exchange the tens counter for ten ones. $400 + 10 + 2$ is the same as $400 + 12$.



$$412 - 5 = 407$$

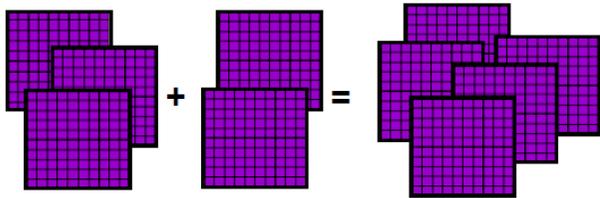


YR3 ADDITION AND SUBTRACTION KNOWLEDGE ORGANISER

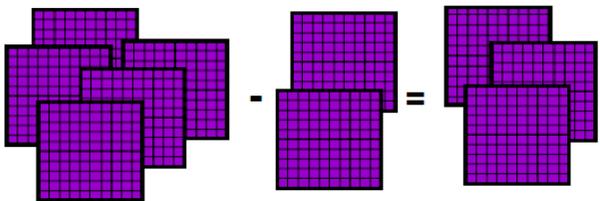
Adding and Subtracting Multiples of 100

$$\cdot\cdot\cdot + \cdot\cdot = \cdot\cdot\cdot\cdot\cdot$$

We can use the fact $3 + 2 = 5$ to help us calculate that $300 + 200 = 500$.



We can then use the inverse to calculate that $500 - 200 = 300$.



When you add or subtract a multiple of 100, it is the digit in the hundreds place that changes. The tens and ones digits do not change.

↓	↓	↓
H	T	O
3	0	0

 $+$

↓	↓	↓
H	T	O
2	0	0

 $=$

↓	↓	↓
H	T	O
5	0	0

Addition - Formal Written Methods

Using equipment to show column addition:

H	T	O
$+$		

	1	4	7
$+$		2	4
<hr/>			
	1	7	1

1

With column addition and subtraction, you must always start the calculation with the column on the right. $7 + 4$ is 11. We can not put 11 in the ones column so a ten is placed under the tens column and the one is placed in the ones column. We then add the extra ten when we add that column.

Subtraction - Formal Written Methods

Using equipment to show column subtraction:

H	T	O
$-$		

	1	4	2
$-$		2	4
<hr/>			

There aren't enough ones to subtract 4 from 2 so we need to exchange a ten for ten ones.

To show this, the 4 is changed to a 3 because we now have 3 tens. The 2 ones becomes 12 ones.

	1	4 ³	2 ¹²
$-$		2	4
<hr/>			
	1	1	8

42 is the same as $30 + 12$. We still have the same amount, but it has been regrouped.

Now, we can answer the subtraction.

