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White Rose calculation policy

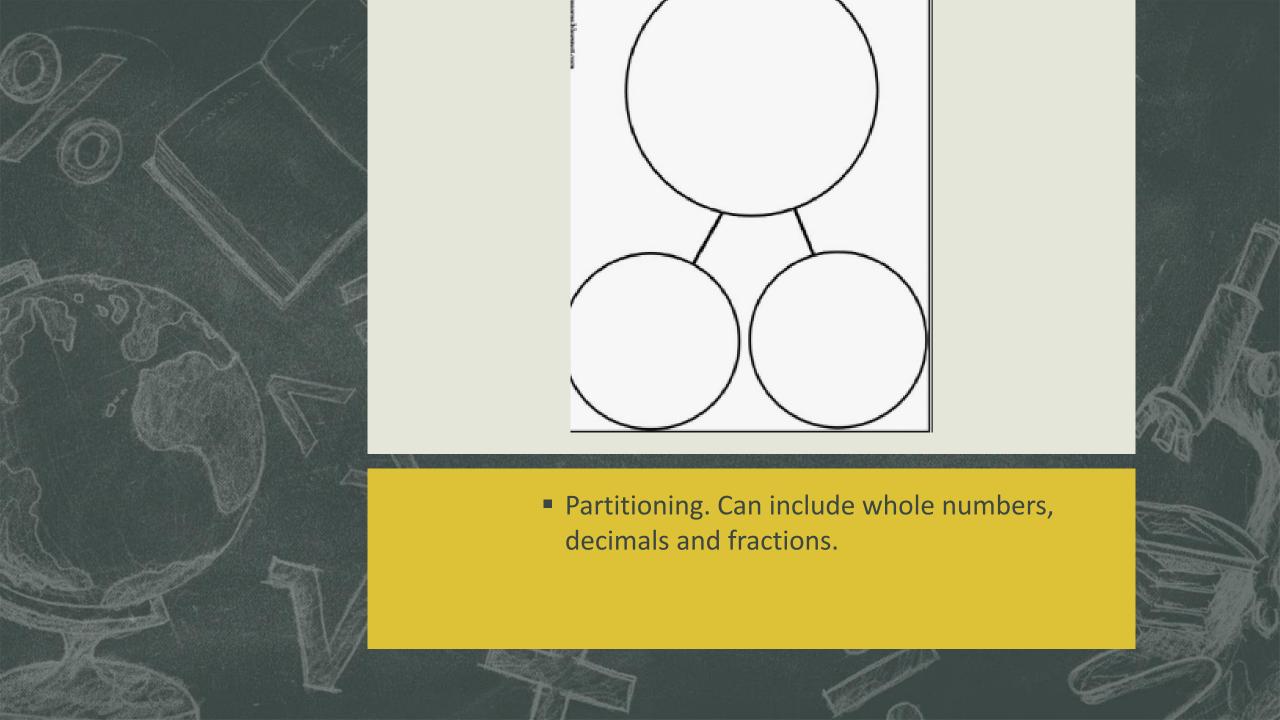
wrm-addition-subtraction-calculation-policy-july-2022.pdf

Year 1 - 6

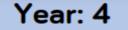
Calculation Policy Addition and Subtraction

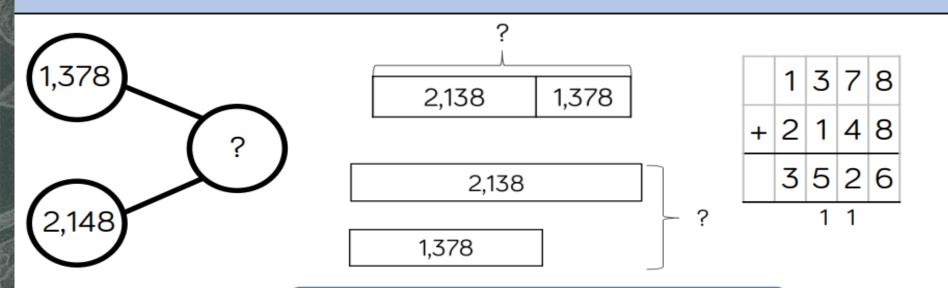
#MathsEveryoneCan

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| ■ Paint the Squares - Interactive N | Paint the Squares - Interactive No Charts (topmarks.co.uk) | Paint the Squares - Interactive N Charts (topmarks.co.uk) | | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 |
| | <u>Charts (topmarks.co.uk)</u> | <u>Charts (topmarks.co.uk)</u> | | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
| | | | | | Pair | nt tl | he S | Squa | ares | 5 - Ir | nter | | |









1,378 + 2,148 = 3,526

| Thousands | Hundreds | Tens | Ones |
|-------------|----------|------|------|
| | | | |
| | | | •••• |
| - Committee | | | |

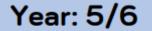
| Thousands | Hundreds | Tens | Ones |
|-----------|------------|------|------|
| 1000 | 00 00 00 | | 0000 |
| 100 (100 | 600 | 0000 | 0000 |
| | 500 | | |

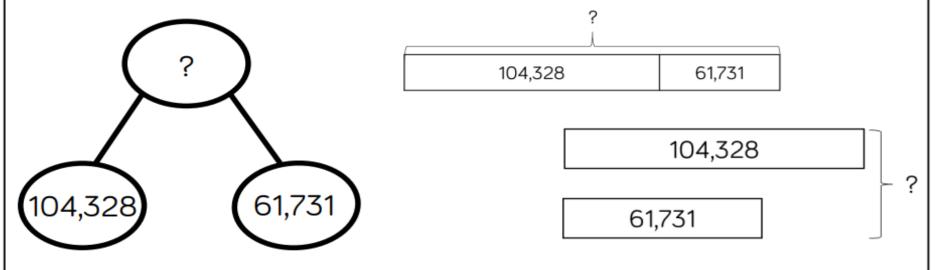
Base 10 and place value counters are the most effective manipulatives when adding numbers with up to 4 digits.

Ensure children write out their calculation alongside any concrete resources so they can see the links to the written column method.

Plain counters on a place value grid can also be used to support learning.

Skill: Add numbers with more than 4 digits





104,328 + 61,731 = 166,059

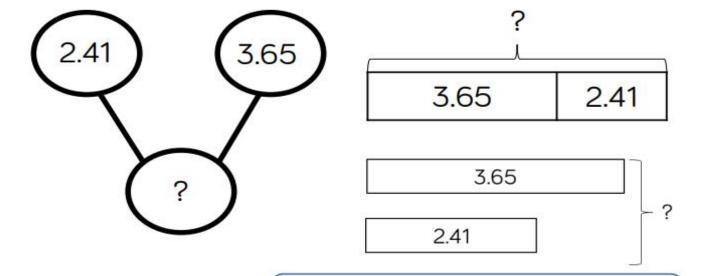
| HTh | TTh | Th | Н | Т | 0 |
|--------|----------------------|----------------|-------------|----------|---|
| 100000 | | 1000 1000 1000 | 100 100 100 | 10 10 | |
| | 10,000 10,000 10,000 | 1000 | 100 100 100 | 10 10 10 | 1 |

| 1 | 0 | 4 | 3 | 2 | 8 |
|---|---|---|---|---|---|
| + | 6 | 1 | 7 | 3 | 1 |
| 1 | 6 | 6 | 0 | 5 | 9 |

Place value counters or plain counters on a place value grid are the most effective concrete resources when adding numbers with more than 4 digits.

At this stage, children should be encouraged to work in the abstract, using the column method to add larger numbers efficiently.

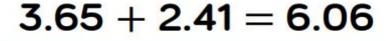
Skill: Add with up to 3 decimal places

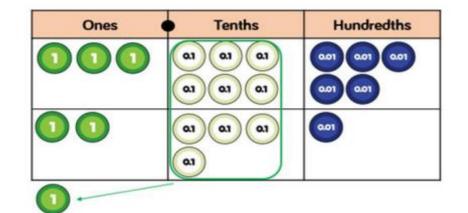


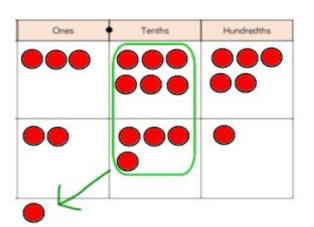
| Year: 5 | 5 | r | 9 | 0 | Y |
|---------|---|---|---|---|---|
| | J | ч | a | E | |

Place value counters and plain counters on a place value grid are the most effective manipulatives when adding decimals with 1, 2 and then 3 decimal places.

Ensure children have experience of adding decimals with a variety of decimal places. This includes putting this into context when adding money and other measures.





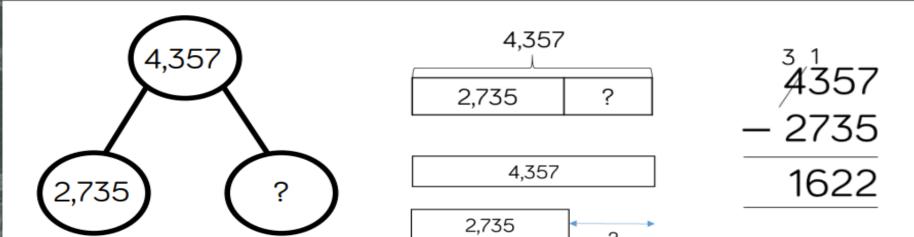


3.65

6.06

+2.41

Skill: Subtract numbers with up to 4 digits



$$4,357 - 2,735 = 1,622$$

| Thousands | Hundreds | Tens | Ones |
|-----------|----------|------|------|
| | | Hłłł | **** |

| Thousands | Hundreds | Tens | Ones |
|------------|----------|------|------|
| 000 | | | |

Year: 4

Base 10 and place value counters are the most effective manipulatives when subtracting numbers with up to 4 digits.

Ensure children write out their calculation alongside any concrete resources so they can see the links to the written column method.

Plain counters on a place value grid can also be used to support learning.

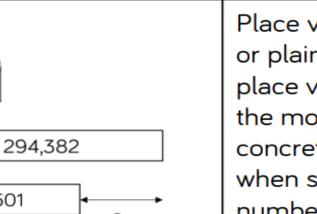
Skill: Subtract numbers with more than 4 digits

182,501

294,382

?

182,501



294,382 - 182,501 = 111,881

| HTh | TTh | Th | Н | Т | 0 |
|-----|-----|-----------|--|--|----------|
| | | ** | 100 100 100 + 100 100 100 100 100 100 100 100 100 | 10 10 10 10 10 10 10 10 10 10 10 10 10 1 | • |

294,382

182,501

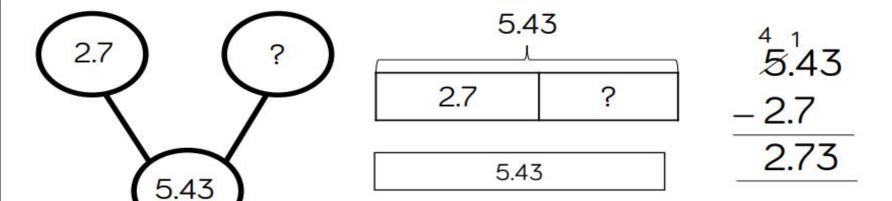
| | 2 | 9 | 3/ | 13 | 8 | 2 |
|---|---|---|----|----|---|---|
| _ | 1 | 8 | 2 | 5 | 0 | 1 |
| | 1 | 1 | 1 | 8 | 8 | 1 |

Year: 5/6

Place value counters or plain counters on a place value grid are the most effective concrete resource when subtracting numbers with more than 4 digits.

At this stage, children should be encouraged to work in the abstract, using column method to subtract larger numbers efficiently.

Skill: Subtract with up to 3 decimal places



2.7

5.43 - 2.7 = 2.73

| Ones • | Tenths | Hundredths |
|--------|-------------------------------|------------|
| | 01 01 01 01 | 001 001 |
| | 01 01 01 01 01 01 01 01 01 01 | |

| Ones | Tenths | Hundredths |
|------|------------|------------|
| | | |
| | | |
| 7 | ØØØ | |
| | ZZZ | |
| | | |

Year: 5/6

Place value counters and plain counters on a place value grid are the most effective manipulative when subtracting decimals with 1, 2 and then 3 decimal places.

Ensure children have experience of subtracting decimals with a variety of decimal places. This includes putting this into context when subtracting money and other measures.

The Comprehensive Maths Vocabulary List for KS1 and KS2 (Free Download) (thirdspacelearning.com)

| Concept | Definition | My Notes |
|--------------------|--|----------|
| Parallel lines | Lines with no common points and always the same distance apart. | |
| Parallelogram | A four-sided polygon with opposite sides equal and parallel and the opposite angles are equal in size. | |
| Perimeter | The length of the distance around the boundary of a shape. | |
| Perpendicular line | A line at right angles to another line or plane. | |
| Polyhedron | A three dimensional shape with plane faces. | |
| Place value | Indicates the position of a numeral (e.g. the place value of the 3 in 738 is 30) | |
| Prime number | A number with only two factors, 1 and itself (e.g. 2,3,5,7,11, 13, 17, 19, 23) | |
| Product | The result when two or more numbers are multiplied. | |
| | | |

Homework

- Doodle Learning
- Sheet of work to consolidate
- Times tables up to 12 x 12
- Number bonds to 100
- Telling the time- Y4- To the nearest minute, analogue and digital, 12 and 24-hour