

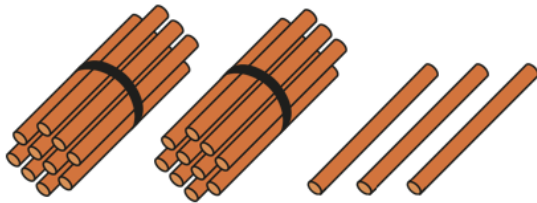
Number and Place Value

Year 2

Place Value in 2-digit numbers (1)

Vocabulary:

Ones Tens Digit Represents Place Value Gattegno Chart Column
Model Part Whole Addend Sum Minuend Subtrahend Difference
Plus Minus Equals Combine Partition



23
23 ones
2 tens and 3 ones

| 10s | 1s |
|-----|----|
| | |

Recognise 2-digit numbers are composed of tens and ones.

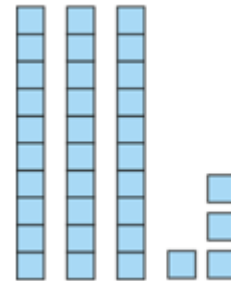
| | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|-----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 |
| 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 |
| 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 |
| 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 |
| 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |

| | | | | | | | | |
|------|------|------|------|------|------|------|------|------|
| 1000 | 2000 | 3000 | 4000 | 5000 | 6000 | 7000 | 8000 | 9000 |
| 100 | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 |
| 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

Tap out 2-digit numbers on the Gattegno Chart.

Make connections to how we write the number.

Locate the position of two-digit numbers on a 100 square and make connections with other 2-digit numbers.



| 10s | 1s |
|-----|----|
| 3 | 4 |

Create 2-digit numbers using Deines and record the number numerically.

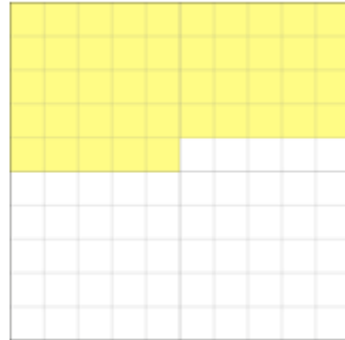
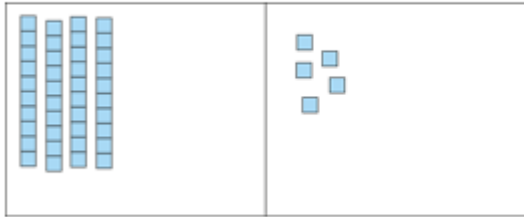
Number and Place Value

Year 2

Place Value in 2-digit numbers (2)

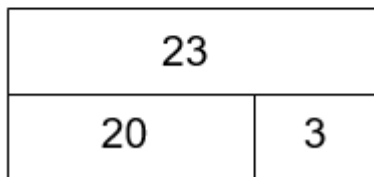
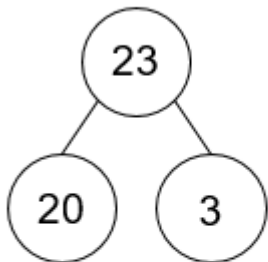
Vocabulary:

Ones Tens Digit Represents Place Value Gattegno Chart Column
Model Part Whole Addend Sum Minuend Subtrahend Difference
Plus Minus Equals Combine Partition



Make connections between the Deines and 100 square.

2 tens and 3 ones



$$20 + 3 = 23$$

$$3 + 20 = 23$$

$$23 = 20 + 3$$

$$23 = 3 + 20$$

$$23 - 20 = 3$$

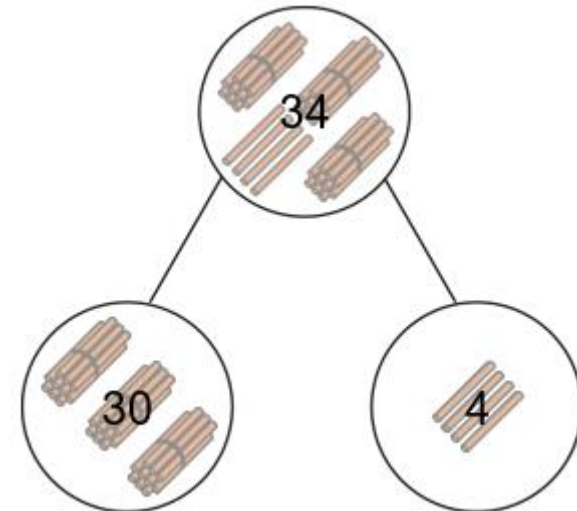
$$23 - 3 = 20$$

$$3 = 23 - 20$$

$$20 = 23 - 3$$

Partition 2-digit numbers in the abstract forms of bar model and part-whole model (cherry model)

Record our understanding as additive equations.



Partition 2-digit numbers into tens and ones.

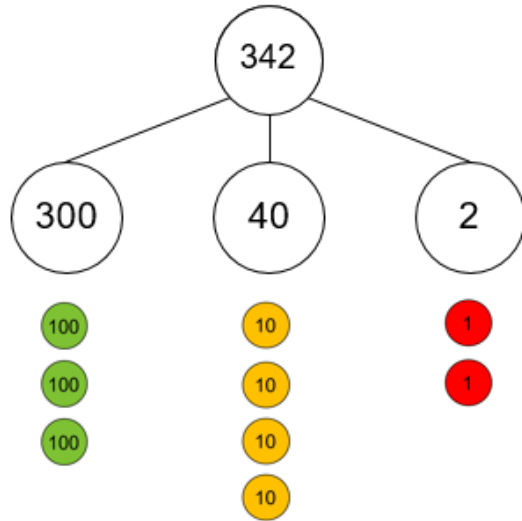
Number and Place Value

Year 3

Place Value in 3-digit numbers

Vocabulary:

Ones Tens Hundreds Digit Represents Place Value Counters Gattegno
 Partition Combine Equation Addend Sum Minuend Subtrahend
 Difference



Form 3-digit numbers using place value counters and the part-part-whole model.

The 2 represents 2 ones

The 4 represents 4 tens

The 3 represents 3 hundreds.

Write as an additive equation.

| 100s | 10s | 1s |
|------|-----|----|
| 3 | 4 | 2 |

$$300 + 40 + 2 = 342$$

Explain what each digit represents and give its value.

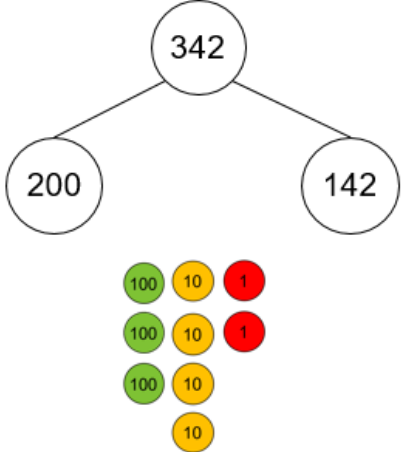
The 2 represents 2 ones. It has a value of 2.

The 4 represents 4 tens. It has a value of 40.

The 3 represents 3 hundreds. It has a value of 300.

| 342 | | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1,000 | 2,000 | 3,000 | 4,000 | 5,000 | 6,000 | 7,000 | 8,000 | 9,000 |
| 100 | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 |
| 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

$$300 + 40 + 2 = 342$$



Explore non-standard partitioning using part-part-whole models and place value counters.

Form 3-digit numbers using a Gattegno chart.

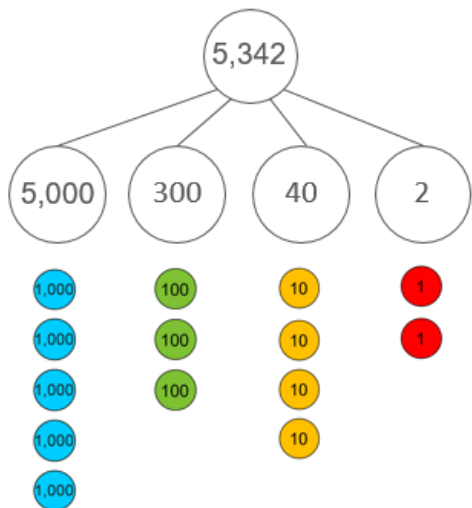
Number and Place Value

Year 4

Place Value in 4-digit numbers

Vocabulary:

Ones Tens Hundreds Thousands Digit Represents Place Value Counters
 Gattegno Partition Combine Equation Addend Sum Minuend
 Subtrahend Difference



$$5,000 + 300 + 40 + 2 = 5,342$$

5,342

| | | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1,000 | 2,000 | 3,000 | 4,000 | 5,000 | 6,000 | 7,000 | 8,000 | 9,000 |
| 100 | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 |
| 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

$$5,000 + 300 + 40 + 2 = 5,342$$

$$5,342 = 40 + 2 + \underline{\quad} + \underline{\quad}$$

Form 4-digit numbers using a Gattegno chart.

Identify missing parts of an equation.

Form 4-digit numbers using place value counters and the part-part-whole model.

The 2 represents 2 ones

The 4 represents 4 tens

The 3 represents 3 hundreds.

The 5 represents 5 thousands

Write as an additive equation.

| 1,000s | 100s | 10s | 1s |
|--------|------|-----|----|
| 5 | 3 | 4 | 2 |

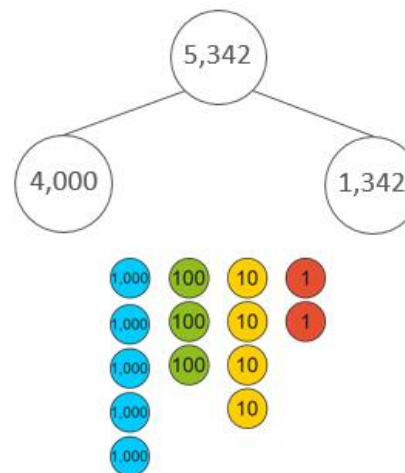
Explain what each digit represents and give its value.

The 2 represents 2 ones. It has a value of 2.

The 4 represents 4 tens. It has a value of 40.

The 3 represents 3 hundreds. It has a value of 300.

The 5 represents 5 thousands



Explore non-standard partitioning using part-part-whole models and place value counters.

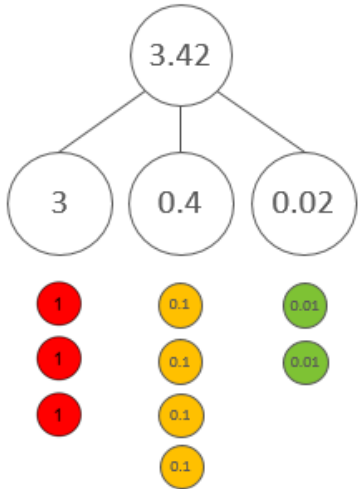
Number and Place Value

Year 5

Place Value in decimal fractions

Vocabulary:

Ones Tens Tenths Hundredths Represents Digit Place Value Counters
 Gattegno Partition Combine Equation Addend Sum Minuend
 Subtrahend Difference



Form decimal fractions using place value counters and the part-part-whole model.

The 2 represents 2 hundredths

The 4 represents 4 tenths

The 3 represents 3 ones.

Write as an additive equation.

| 10s | 1s | 0.1s | 0.01s |
|-----|----|------|-------|
| 5 | 3 | 4 | 2 |

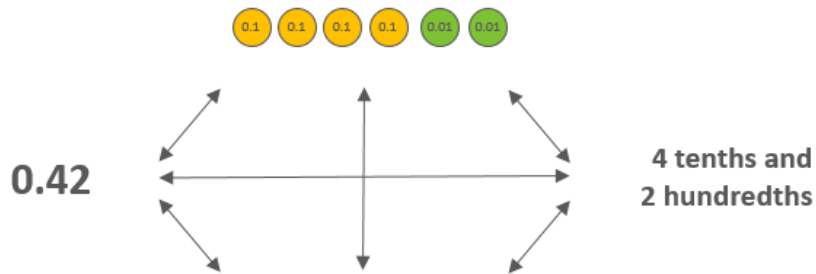
Represent on a Place Value Chart and describe each value.

The digit in the tens place is 5. It has a value of 50.

The digit in the ones place is 3. It has a value of 3.

The digit in the tenths place is 4. It has a value of 0.4.

The digit in the hundredths place is 2. It has a value of 0.02.



| | | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1,000 | 2,000 | 3,000 | 4,000 | 5,000 | 6,000 | 7,000 | 8,000 | 9,000 |
| 100 | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 |
| 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 0.1 | 0.2 | 0.3 | 0.4 | 0.5 | 0.6 | 0.7 | 0.8 | 0.9 |
| 0.01 | 0.02 | 0.03 | 0.04 | 0.05 | 0.06 | 0.07 | 0.08 | 0.09 |

Make connections between different representations of decimal fractions with the Gattegno Chart.

ones tenths hundredths

0.12

Skip count in one-hundredths recognising the number of hundredths in a 2-digit decimal fraction.

Number and Place Value

Year 5

Place Value in decimal fractions

Vocabulary:

Ones Tens Tenths Hundredths Represents Digit Place Value Counters
 Gattegno Partition Combine Equation Addend Sum Minuend
 Subtrahend Difference

53.42

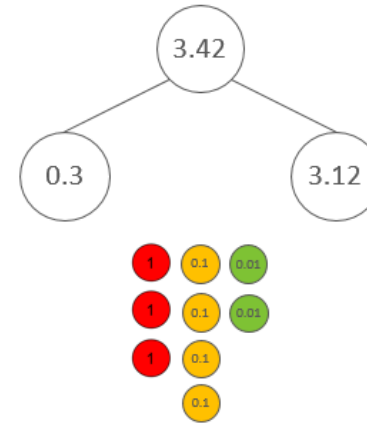
| | | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1,000 | 2,000 | 3,000 | 4,000 | 5,000 | 6,000 | 7,000 | 8,000 | 9,000 |
| 100 | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 |
| 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 0.1 | 0.2 | 0.3 | 0.4 | 0.5 | 0.6 | 0.7 | 0.8 | 0.9 |
| 0.01 | 0.02 | 0.03 | 0.04 | 0.05 | 0.06 | 0.07 | 0.08 | 0.09 |

$$0.02 + 0.4 + 3 + 50 = 53.42$$

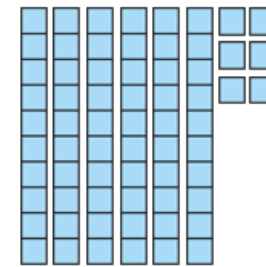
$$72.49 = 0.09 + 2 + \underline{\quad} + \underline{\quad}$$

Form 4-digit numbers including decimals using a Gattegno chart.

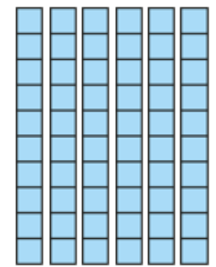
Identify missing parts of an equation.



Explore non-standard partitioning using part-part-whole models and place value counters.

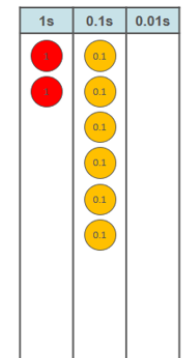
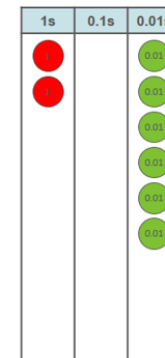


2.06



2.6

Compare decimal fractions using deines, place value counters and a place value chart.



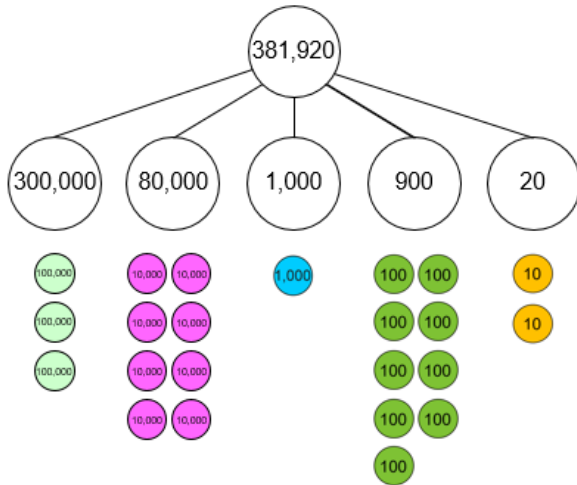
Number and Place Value

Year 6

Place Value in Numbers up to 10,000,000.

Vocabulary:

Ones Tens Hundreds Thousands Ten-thousands Hundred-thousands
 Millions Ten-Millions Tenths Hundredths Represents Digit Place Value
 Counters Gattegno Partition Combine Equation Addend Sum
 Minuend Subtrahend Difference



Form numbers to 10,000,000 using place value counters and the part-part-whole model.

The 2 represents 2 tens

The 9 represents 9 hundreds

The 3 represents 3 hundred thousands.

Write as an additive equation.

$$200,000 + 10,000 + 100 + 20 = 210,120$$

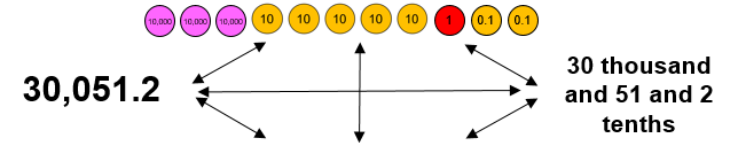
| Millions | | | Thousands | | | Ones | | |
|----------|-----|----|-----------|-----|----|------|-----|----|
| 100s | 10s | 1s | 100s | 10s | 1s | 100s | 10s | 1s |
| | | | | | 1 | 9 | 3 | 7 |
| | | | | 5 | 1 | 9 | 3 | 7 |
| | | | 4 | 5 | 1 | 9 | 3 | 7 |
| | | 5 | 4 | 5 | 1 | 9 | 3 | 7 |

3,870,291.46

| Millions | | | Thousands | | | Ones | | | | |
|----------|-----|----|-----------|-----|----|------|-----|----|------|-------|
| 100s | 10s | 1s | 100s | 10s | 1s | 100s | 10s | 1s | 0.1s | 0.01s |
| | | 3 | 8 | 7 | 0 | 2 | 9 | 1 | 4 | 6 |

Recognise the value of each digit.

The 3 represent 3 million.



| | | | | | | | | |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 1,000,000 | 2,000,000 | 3,000,000 | 4,000,000 | 5,000,000 | 6,000,000 | 7,000,000 | 8,000,000 | 9,000,000 |
| 100,000 | 200,000 | 300,000 | 400,000 | 500,000 | 600,000 | 700,000 | 800,000 | 900,000 |
| 10,000 | 20,000 | ★ 30,000 | 40,000 | 50,000 | 60,000 | 70,000 | 80,000 | 90,000 |
| 1,000 | 2,000 | 3,000 | 4,000 | 5,000 | 6,000 | 7,000 | 8,000 | 9,000 |
| 100 | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 |
| 10 | 20 | 30 | 40 | ★ 50 | 60 | 70 | 80 | 90 |
| ★ 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 0.1 | ★ 0.2 | 0.3 | 0.4 | 0.5 | 0.6 | 0.7 | 0.8 | 0.9 |
| 0.01 | 0.02 | 0.03 | 0.04 | 0.05 | 0.06 | 0.07 | 0.08 | 0.09 |

Make connections between different representations of numbers to 10,000,000 with the Gattegno Chart.

Read numbers to 10,000,000. Focus on the structure of millions, thousands and ones.

5 million, four hundred and fifty one thousand, nine hundred and thirty one (ones).