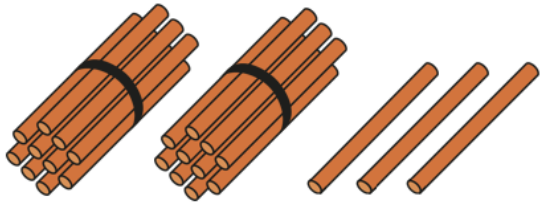
Number and Place Value

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



2 3

23 ones

2 tens and 3 ones

10s	1s

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

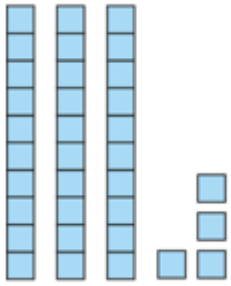
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

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.

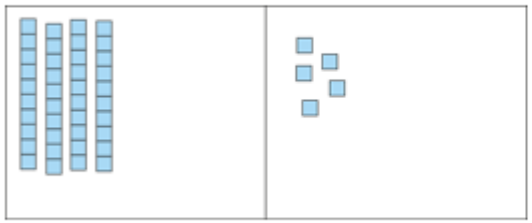
Number and Place Value

Year 2

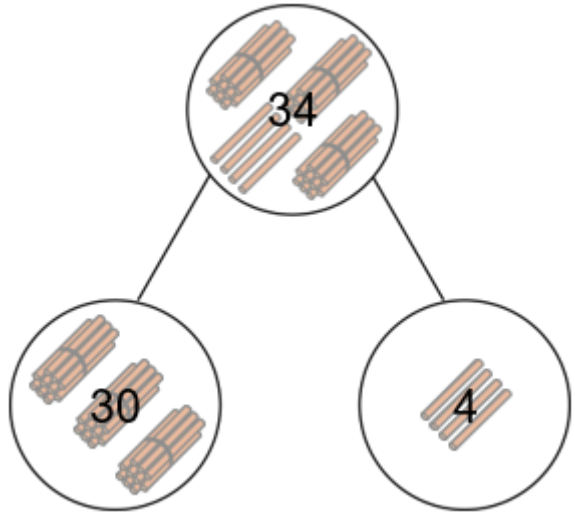
Place Value in 2-digit numbers (2)

Vocabulary:

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

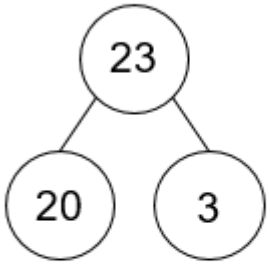


Make connections between the Deines and 100 square.



Partition 2-digit numbers into tens and ones.

2 tens and 3 ones



23	
20	3

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-part-whole model (cherry model)

Record our understanding as additive equations.

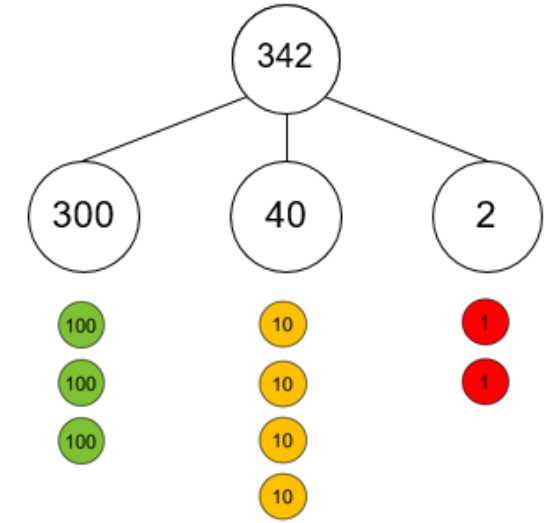
Number and Place Value

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



300 + 40 + 2 = 342

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

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.

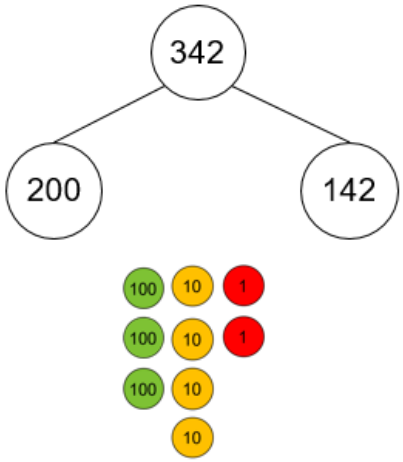
The 3 represents 3 hundreds. It has a value of 300.

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

Form 3-digit numbers using a Gattegno chart.



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

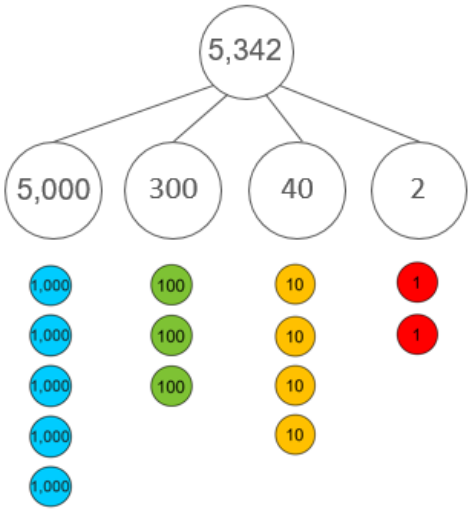
Number and Place Value

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



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.

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

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

5,342

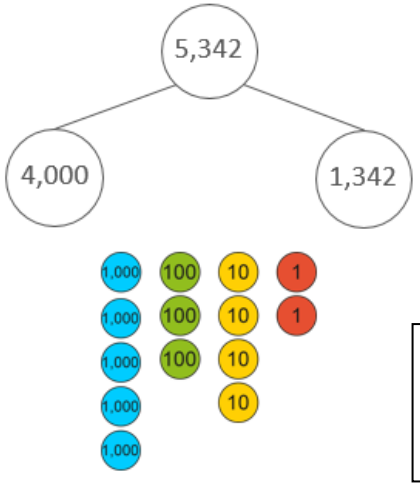
1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000
100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9

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

5,342 = 40 + 2 + _____ + _____

Form 4-digit numbers using a Gattegno chart.

Identify missing parts of an equation.



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

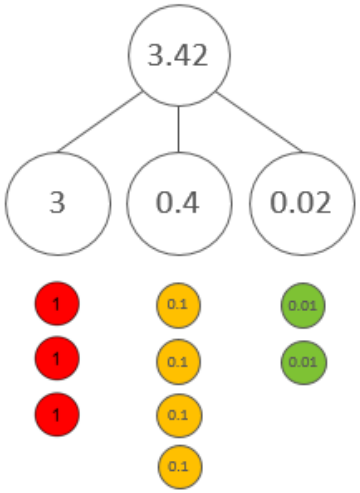
Number and Place Value

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.

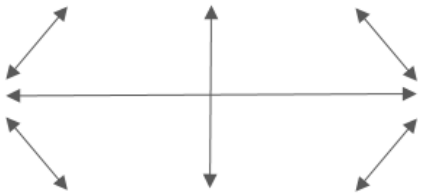
The digit in the tens place is 5. It has a value of 50.

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.

0.42



4 tenths and 2 hundredths

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

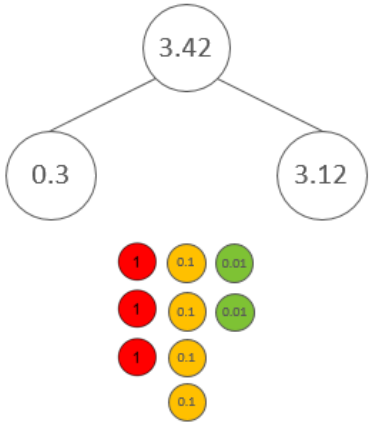
1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000
100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9
0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09

0.02 + 0.4 + 3 + 50 = 53.42

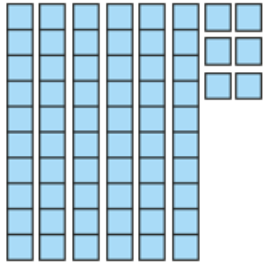
72.49 = 0.09 + 2 + _____ + _____

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

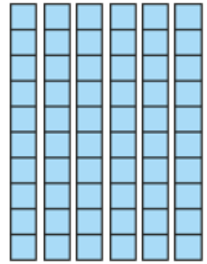
Identify missing parts of an equation.



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

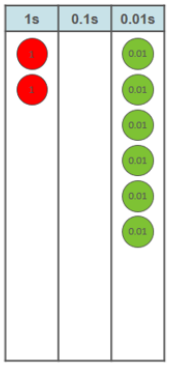


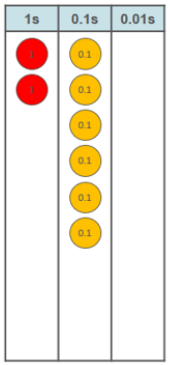
2.06



2.6

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





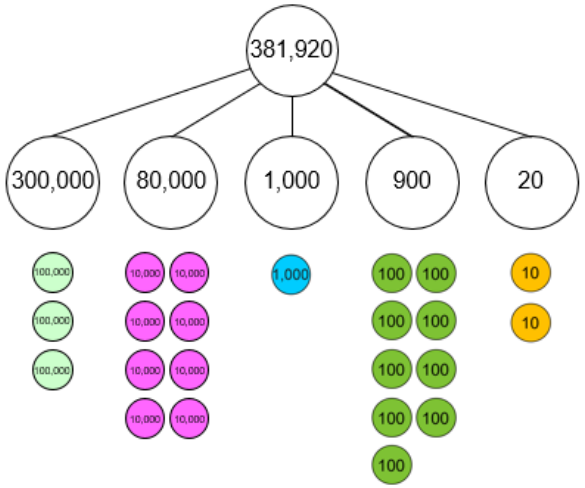
Number and Place Value

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



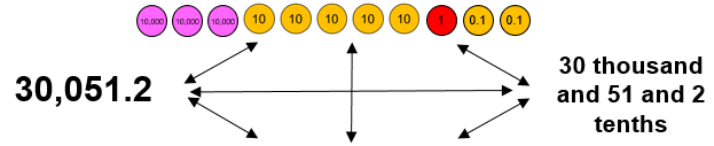
Form numbers to 10,000,000 using place value counters and the part-part-whole model.

The 2 represents 2 tens

The 9 represents 9 hundreds

The 3 represents 3 hundred thousands.

Write as an additive equation.



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

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

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).

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

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.