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

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

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.

10s	1s
3	4

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

Vocabulary:

Ones   Tens   Digit   Represents   Place Value   Gattegno   Chart   Column
Model   Part   Whole   Addend   Sum   Minuend   Subtrahend   Difference
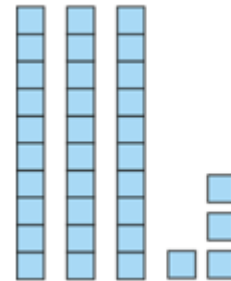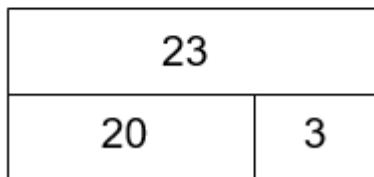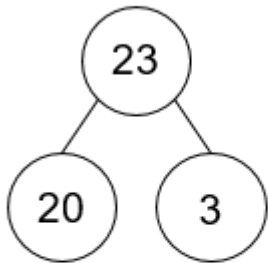Plus   Minus   Equals   Combine   Partition
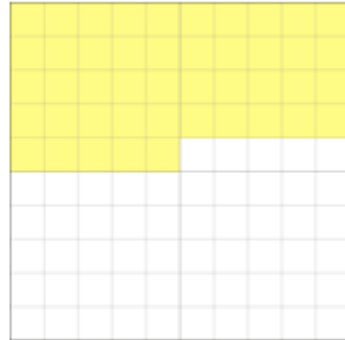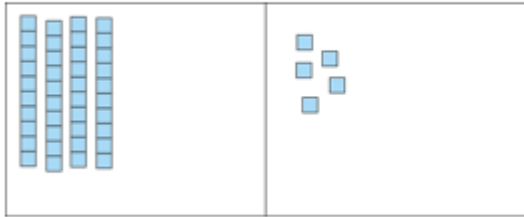
Make connections between the Deines and 100 square.

2 tens and 3 ones

34

30

4

Partition 2-digit numbers into tens and ones.

23

20   3

$$20 + 3 = 23$$
$$3 + 20 = 23$$

$$23 = 20 + 3$$
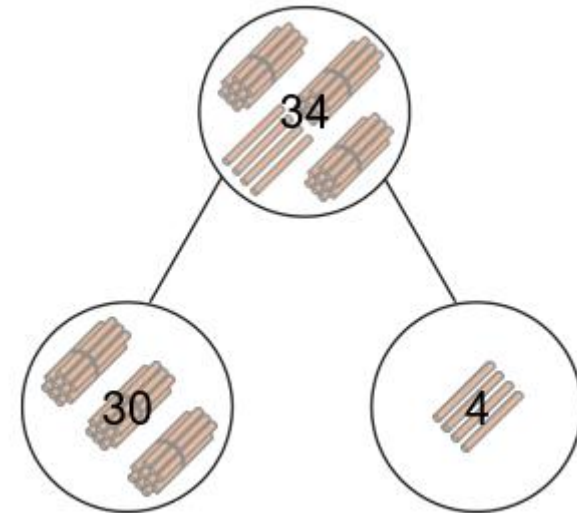$$23 = 3 + 20$$

$$23 - 20 = 3$$
$$23 - 3 = 20$$

$$3 = 23 - 20$$
$$20 = 23 - 3$$

23	
20	3

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

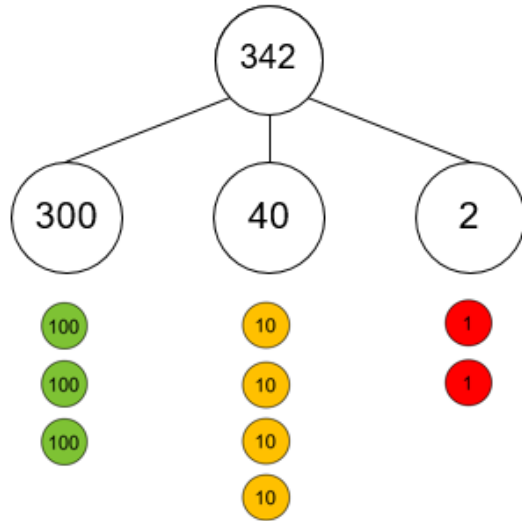Record our understanding as additive equations.

Number and Place Value

Year 3

Place Value in 3-digit numbers

342

300   40   2

100	10	1
100	10	1
100	10	
	10	

$$300 + 40 + 2 = 342$$

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

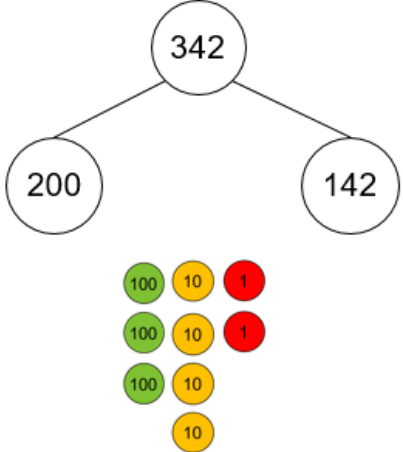**Explain what each digit represents and give its value.**

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.

342

200   142

100	10	1
100	10	1
100	10	
	10	

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

5,342

5,000   300   40   2

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

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.

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

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.

5,342

4,000   1,342

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

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.

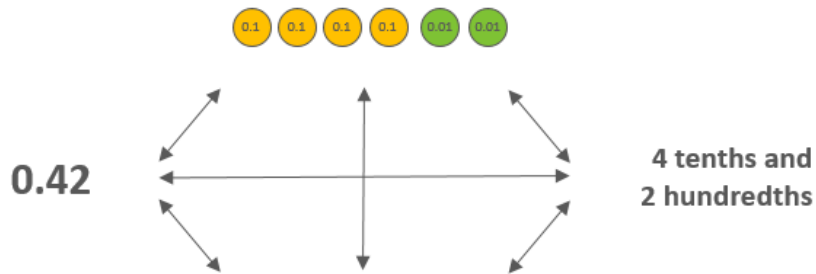| 10s	1s	0.1s	0.01s
5	3	4	2

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.

ones   tenths   hundredths

0.12

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

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.

Vocabulary:

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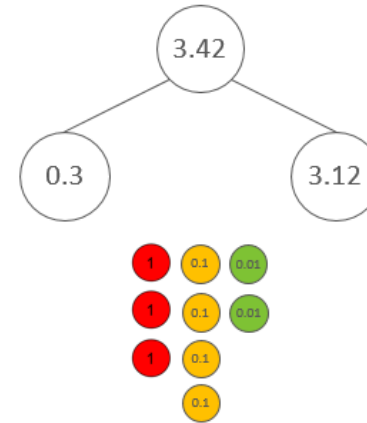Subtrahend   Difference

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

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

$$72.49 = 0.09 + 2 + \underline{\hspace{1cm}} + \underline{\hspace{1cm}}$$
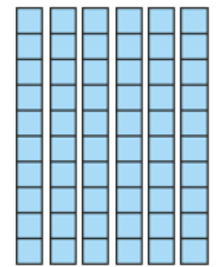
Form 4-digit numbers including decimals using a Gattegno chart.

Identify missing parts of an equation.

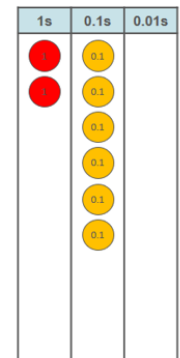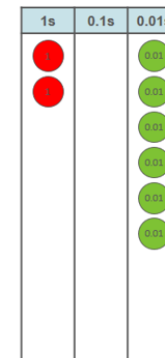**Explore non-standard partitioning using part-part-whole models and place value counters.**

3.42

0.3   3.12
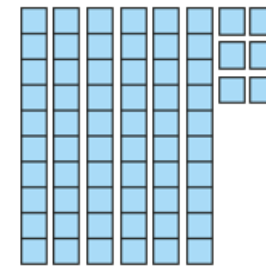
2.06   2.6

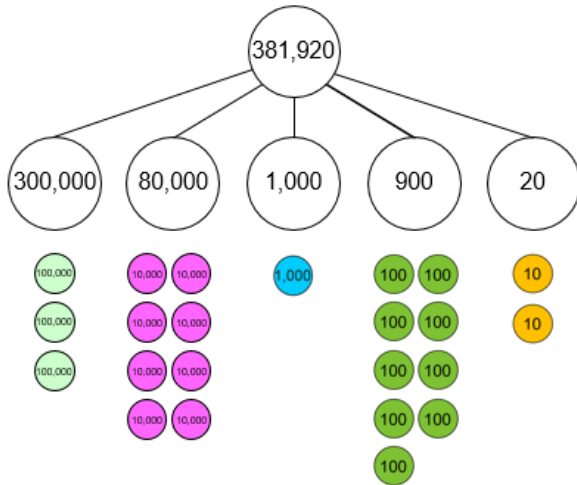**Compare decimal fractions using deines, place value counters and a place value chart.**

1s	0.1s	0.01s

1s	0.1s	0.01s

Number and Place Value

Year 6

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

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.

30,051.2

30 thousand and 51 and 2 tenths

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

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

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).

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.