

Addition, Subtraction, Multiplication and Division

Lesson sequence

Add and subtract two numbers across 10 or 100
 Add and subtract a two digit from a three-digit number
 Compliments to 100
 Estimate
 Inverse operations
 Using arrays
 Multiply by 2, 3, 4, 5, 8 and 10
 Sharing and grouping
 Dividing by 3, 4 and 8

Vocabulary revision

- *Hundreds*
- *Tens*
- *Division*
- *Digit*
- *Multiple*
- *Pattern*
- *Partition*
- *One, two- or three-digit number*
- *Estimate*
- *Part*
- *Whole*
- *Partition*
- *Sharing*
- *Grouping*
- *Bar Model*

Sticky learning

New Knowledge

- *To know the formal written methods of columnar addition and subtraction*
- *To recall multiplication and division facts for the 3, 4 and 8 multiplication tables*
- *To know that the 2, 4 and 8 times tables are connected through doubling*
- *To know the formal written method for multiplication*

New Skills

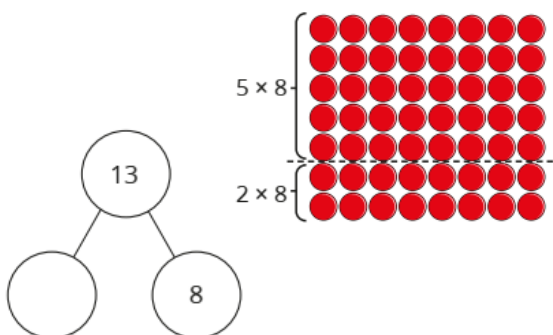
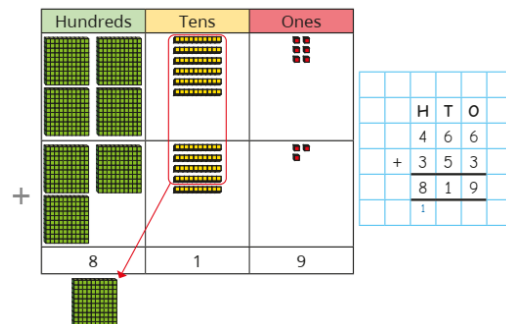
- *To identify, represent and estimate numbers using different representations*
- *To add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction*
- *To estimate the answer to a calculation and use inverse operations to check answers*
- *To use multiplication and division facts for the 3, 4 and 8 multiplication tables*

New vocabulary I will learn

- *Compliments*
 - *Inverse*
 - *Arrays*
- *Exchange*
- *Columns*
- *Commutative*
 - *Partition*
 - *Estimate*

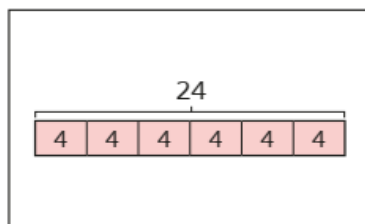
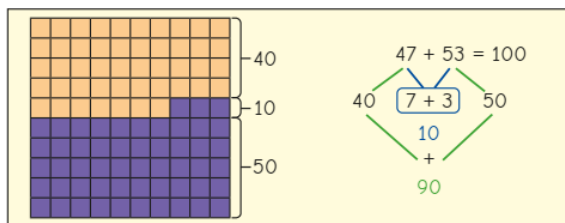
Pictorial representations

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



	T	O
	8	5
-	2	4

	H	T	O
	3	2	8
-	1	0	7



Concept Links/Prior Knowledge

- To know the place value of each digit in a two-digit number (tens, ones)
- To know that zero is used to represent nothing or an empty set of things
- To know that zero can be used as a place holder – to symbolise the absence of a value in a particular position e.g. In the number 20, the zero represents no ones
- To know that subtraction is not commutative
- To know that there is a relationship between addition and subtraction and we call this the inverse
- To know that when we add or subtract using columns, the place value of digits need to be lined up
- To recall multiplication and division facts for the two, five and ten multiplication tables, including recognising odd and even numbers
- To know that multiplication of two numbers can be done in any order (commutative)
- To know that division is not commutative
- To know the multiplication ($\times$) and division ($\div$) signs
- To know that an array is an arrangement of objects, numbers or pictures in equal columns or rows
- To know that multiplication and division are the inverse of each other (for example, $4 \times 5 = 20$ and $20 \div 5 = 4$)