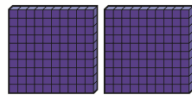
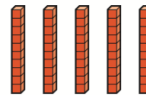
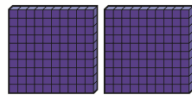
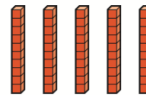
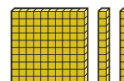
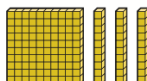
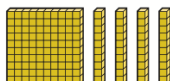
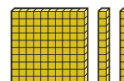
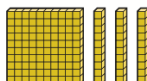
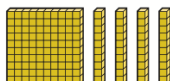
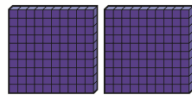
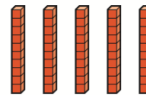
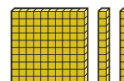
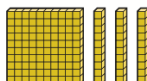
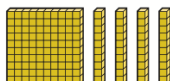
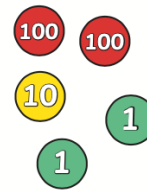
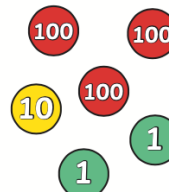
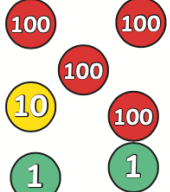
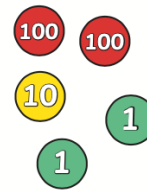
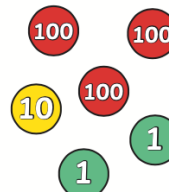
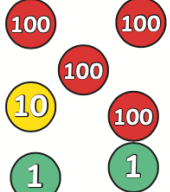
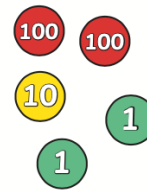
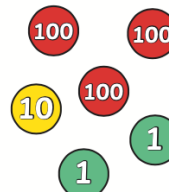
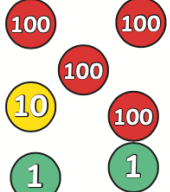


Number and Place Value

Knowledge Organiser

Key Vocabulary	3-Digit Numbers	10 and 100 More or Less																															
hundreds	256 <table><tr><td>two hundred</td><td>fifty</td><td>six</td></tr><tr><td></td><td></td><td></td></tr><tr><td>200</td><td>50</td><td>6</td></tr></table>	two hundred	fifty	six				200	50	6	<table><tr><td>Ten Less</td><td></td><td>Ten More</td></tr><tr><td></td><td></td><td></td></tr><tr><td>120</td><td>130</td><td>140</td></tr></table>	Ten Less		Ten More				120	130	140													
two hundred		fifty	six																														
																																	
200		50	6																														
Ten Less		Ten More																															
																																	
120	130	140																															
tens																																	
ones																																	
zero																																	
place value																																	
greater than	Counting in 4s and 8s <table><tr><td>0</td><td>4</td><td>8</td><td>12</td><td>16</td><td>20</td><td>24</td><td>28</td><td>32</td><td>36</td><td>40</td></tr></table> <table><tr><td>0</td><td>8</td><td>16</td><td>24</td><td>32</td><td>40</td><td>48</td><td>56</td><td>64</td><td>72</td><td>80</td></tr></table>	0	4	8	12	16	20	24	28	32	36	40	0	8	16	24	32	40	48	56	64	72	80	<table><tr><td>One Hundred Less</td><td></td><td>One Hundred More</td></tr><tr><td></td><td></td><td></td></tr><tr><td>212</td><td>312</td><td>412</td></tr></table>	One Hundred Less		One Hundred More				212	312	412
0	4	8	12	16	20	24	28	32	36	40																							
0	8	16	24	32	40	48	56	64	72	80																							
One Hundred Less		One Hundred More																															
																																	
212	312	412																															
less than																																	
order																																	
more																																	
less	Counting in 50s and 100s <table><tr><td>0</td><td>50</td><td>100</td><td>150</td><td>200</td><td>250</td><td>300</td><td>350</td><td>400</td><td>450</td><td>500</td></tr></table> <table><tr><td>0</td><td>100</td><td>200</td><td>300</td><td>400</td><td>500</td><td>600</td><td>700</td><td>800</td><td>900</td><td>1000</td></tr></table>		0	50	100	150	200	250	300	350	400	450	500	0	100	200	300	400	500	600	700	800	900	1000									
0	50	100	150	200	250	300	350	400	450	500																							
0	100	200	300	400	500	600	700	800	900	1000																							
partition																																	
digit																																	

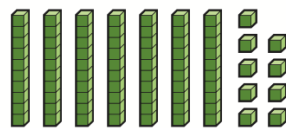
Number and Place Value

Compare and Order

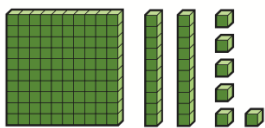
100s	10s	1s

$324 > 243$
greater than

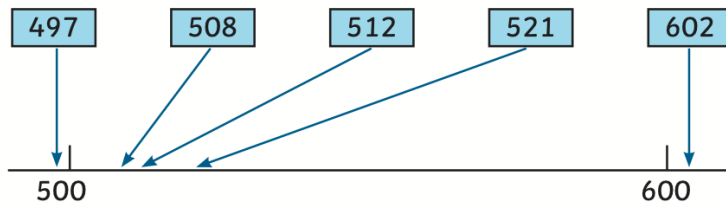
100s	10s	1s



$79 < 126$
less than



smallest



greatest

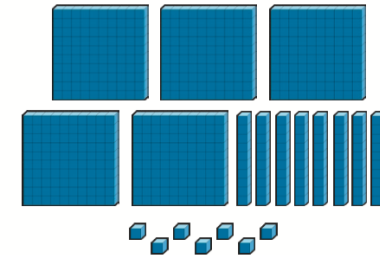
Knowledge Organiser

Represent Numbers to 1000

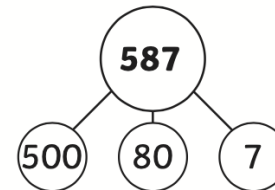
587

five hundred and eighty-seven

Hundreds	Tens	Ones

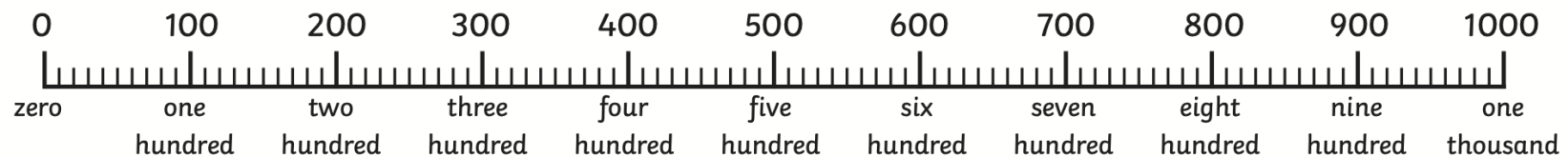


$$500 + 80 + 7$$



Hundreds	Tens	Ones

Numerals and Words to 1000



Addition and Subtraction

Knowledge Organiser

Key Vocabulary

add

total

plus

sum

more

altogether

difference

subtract

less

minus

take away

column addition

column subtraction

exchange

estimate

inverse operation

solve problems

number facts

place value

Addition and Subtraction Methods

3-digit and 1-digit numbers

Not crossing 10s

$$268 - 4 = 264$$

Hundred	Ten	Ones

$$343 + 6 = 349$$



Crossing 10s (Exchanging)

324		
300	20	4
300	10	14

$$316 + 8 = 324$$

316	8

$$324 - 8 = 316$$

3-digit and 2-digit numbers

Add and subtract tens

Hundred	Ten	Ones

$$451 + 3 \text{ tens} = 481 \quad (5 + 3 = 8)$$

$$451 - 4 \text{ tens} = 411 \quad (5 - 4 = 1)$$

Crossing 10s (Exchanging)

$$258 + 80 = 338$$

- Column method
- Count in 10s mentally
- Add 100, subtract 20

Crossing 10 and 100

$$\begin{array}{r} 368 \\ +73 \\ \hline 1 \end{array}$$

$$\begin{array}{r} 31 \\ 441 \\ -73 \\ \hline 8 \end{array}$$

3-digit numbers

Not crossing

$$679 - 351 = 328$$

Hundred	Ten	Ones

Crossing 10s (Exchanging)

?	269
154	269
514	
268	?

$$\begin{array}{r} 269 \\ +154 \\ \hline 423 \\ 11 \end{array}$$

Add and Subtract 100s

$$284 + 300 = 584$$

Hundred	Ten	Ones

Addition and Subtraction

Estimate

Estimate by dividing the hundred into 250 and 225.

Estimate 10s (330, 340) between 325 and 350.



Estimate $167 - 89$

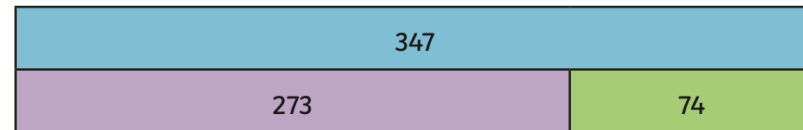
Use near numbers $170 - 90 = 80$

Near numbers:

413	279	521	782
↓	↓	↓	↓
400	300	500	800

Knowledge Organiser

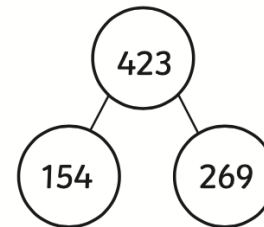
Check Answers



$347 - 74 = 273$ can be checked using

$273 + 74 = 347$

This part whole shows the inverse calculations using these three numbers.



$154 + 269 = 423$	$269 + 154 = 423$
$423 - 154 = 269$	$423 - 269 = 154$

Multiplication and Division

Knowledge Organiser

Key Vocabulary

times tables

multiply by

divide by

array

fact families

regrouping

Multiplication and Division Facts (3, 4 and 8 multiplication tables)

x	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	12	24	36	48	60	72	84	96	108	120	132	144

3 x Tables

$1 \times 3 = 3$	$3 \div 3 = 1$
$2 \times 3 = 6$	$6 \div 3 = 2$
$3 \times 3 = 9$	$9 \div 3 = 3$
$4 \times 3 = 12$	$12 \div 3 = 4$
$5 \times 3 = 15$	$15 \div 3 = 5$
$6 \times 3 = 18$	$18 \div 3 = 6$
$7 \times 3 = 21$	$21 \div 3 = 7$
$8 \times 3 = 24$	$24 \div 3 = 8$
$9 \times 3 = 27$	$27 \div 3 = 9$
$10 \times 3 = 30$	$30 \div 3 = 10$
$11 \times 3 = 33$	$33 \div 3 = 11$
$12 \times 3 = 36$	$36 \div 3 = 12$

4 x Tables

$1 \times 4 = 4$	$4 \div 4 = 1$
$2 \times 4 = 8$	$8 \div 4 = 2$
$3 \times 4 = 12$	$12 \div 4 = 3$
$4 \times 4 = 16$	$16 \div 4 = 4$
$5 \times 4 = 20$	$20 \div 4 = 5$
$6 \times 4 = 24$	$24 \div 4 = 6$
$7 \times 4 = 28$	$28 \div 4 = 7$
$8 \times 4 = 32$	$32 \div 4 = 8$
$9 \times 4 = 36$	$36 \div 4 = 9$
$10 \times 4 = 40$	$40 \div 4 = 10$
$11 \times 4 = 44$	$44 \div 4 = 11$
$12 \times 4 = 48$	$48 \div 4 = 12$

8 x Tables

$1 \times 8 = 8$	$8 \div 8 = 1$
$2 \times 8 = 16$	$16 \div 8 = 2$
$3 \times 8 = 24$	$24 \div 8 = 3$
$4 \times 8 = 32$	$32 \div 8 = 4$
$5 \times 8 = 40$	$40 \div 8 = 5$
$6 \times 8 = 48$	$48 \div 8 = 6$
$7 \times 8 = 56$	$56 \div 8 = 7$
$8 \times 8 = 64$	$64 \div 8 = 8$
$9 \times 8 = 72$	$72 \div 8 = 9$
$10 \times 8 = 80$	$80 \div 8 = 10$
$11 \times 8 = 88$	$88 \div 8 = 11$
$12 \times 8 = 96$	$96 \div 8 = 12$

Write and Calculate Mathematical Statements

$$4 \times 8 = 32$$

$$32 \div 8 = 4$$



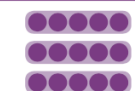
$$8 \times 4 = 32$$

$$32 \div 4 = 8$$



$$5 \times 3 = 15$$

$$15 \div 3 = 5$$



$$3 \times 5 = 15$$

$$15 \div 5 = 3$$



Related Calculations

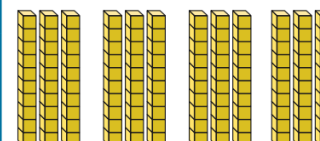
$$3 \times 4 = 12$$



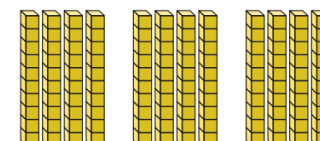
$$4 \times 3 = 12$$



$$30 \times 4 = 120$$



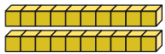
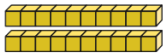
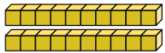
$$40 \times 3 = 120$$



Multiplication and Division

Knowledge Organiser

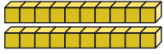
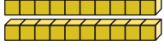
Written Multiplication Methods - No Regrouping

Tens	Ones
	
	
	

$$23 \times 3 = 69$$

	T	O
	2	3
×		3
	6	9

Written Multiplication Methods - With Regrouping

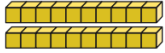
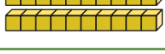
Tens	Ones
	
	
	
	

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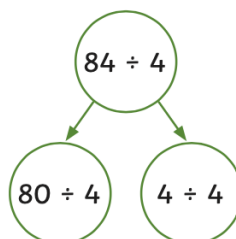
$$24 \times 4 = 96$$

	T	O
	2	4
×		4
	9	6
	1	

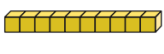
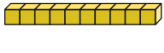
Written Division Methods - No Regrouping

Tens	Ones
	
	
	
	

	2	1
4	8	4



Written Division Methods - With Regrouping

Tens	Ones
	
	
	

 →

	1	5
3	4	¹ 5

