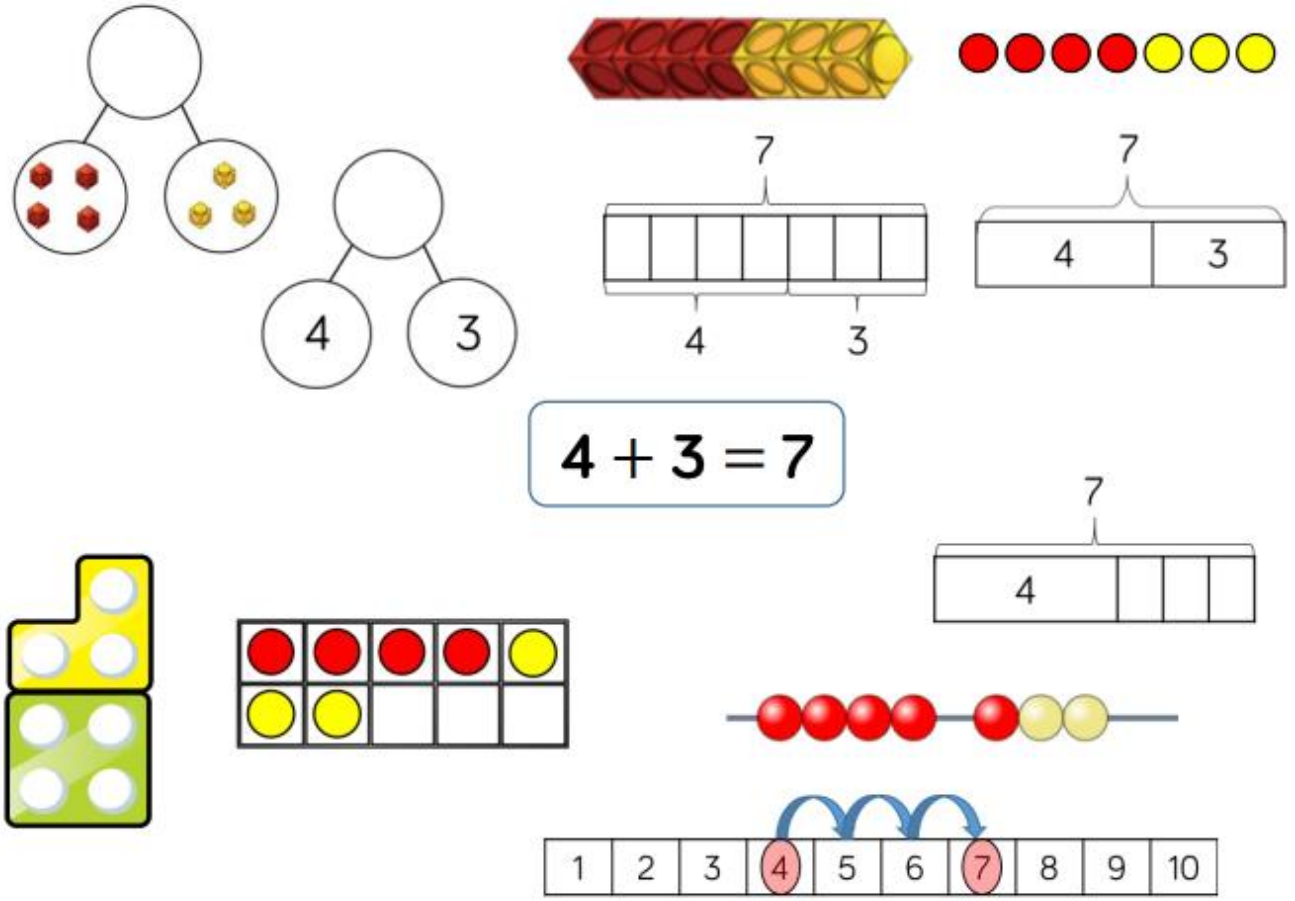
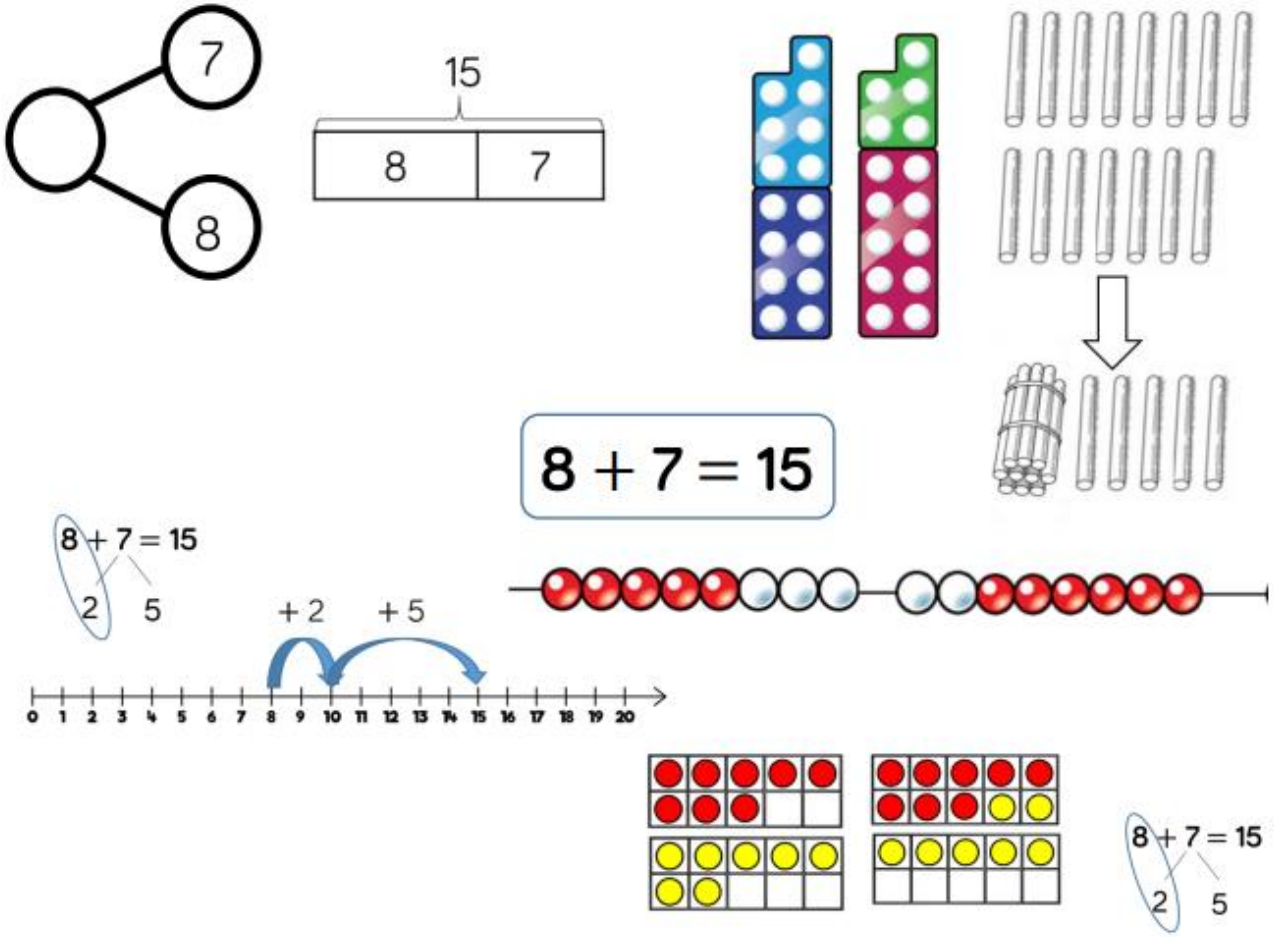
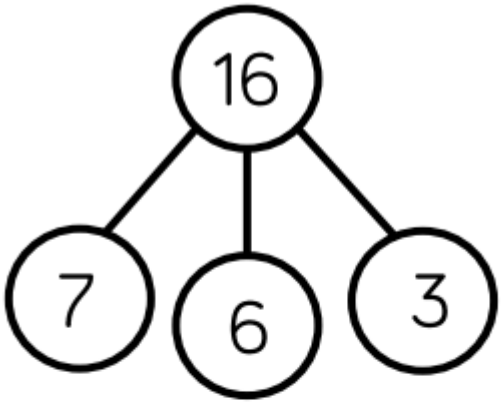
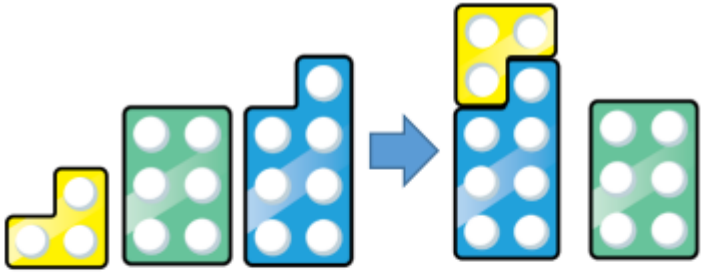
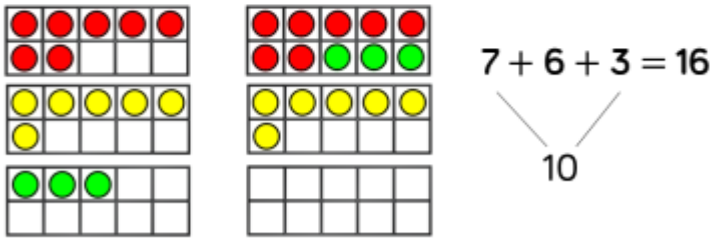
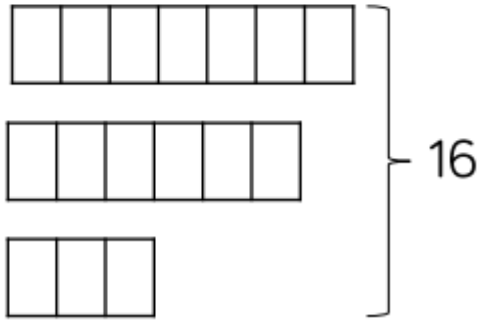
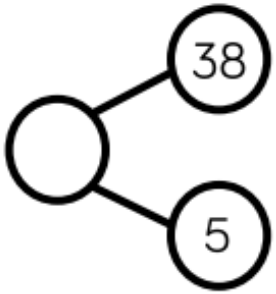
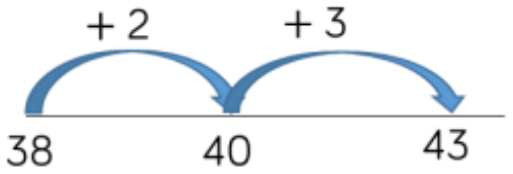
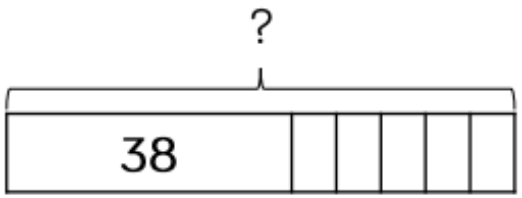
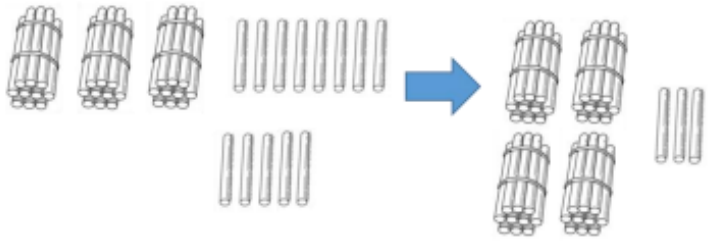
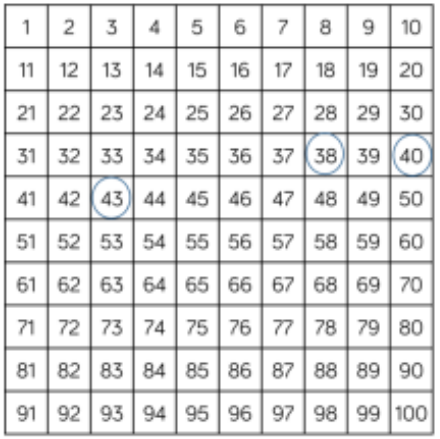
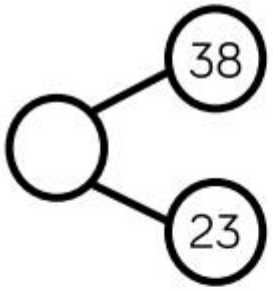
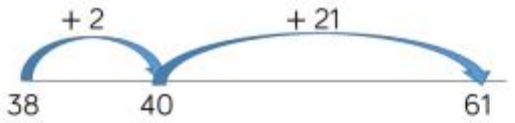
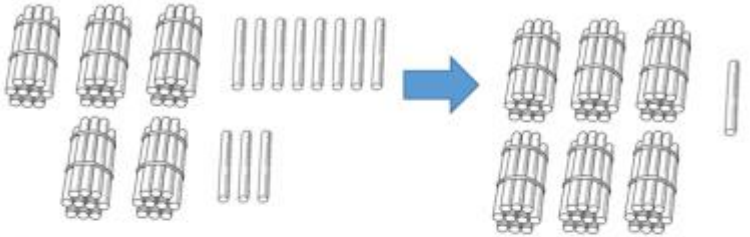
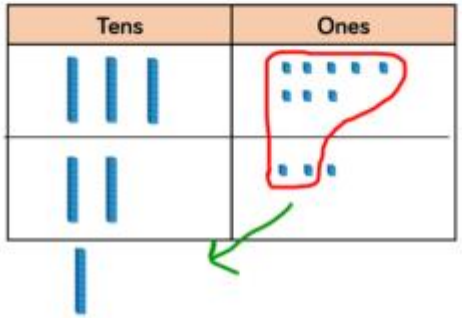
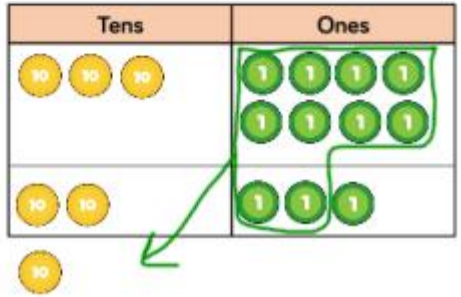
Addition

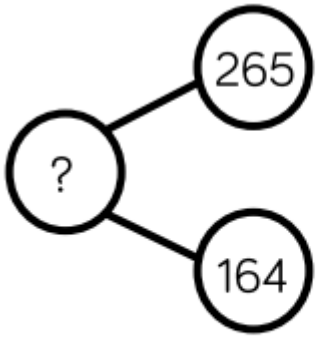
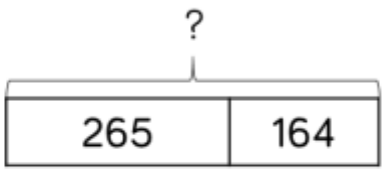
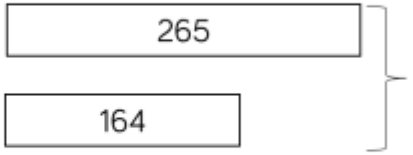
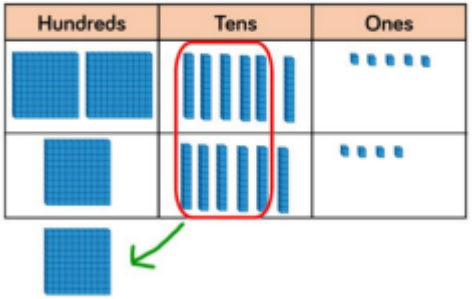
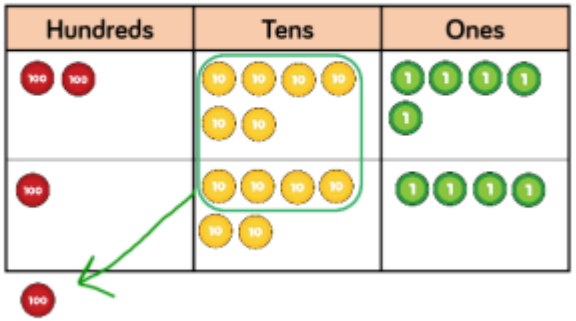
Year	Skill	Representations and Models	Examples
1	**Add two 1-digit numbers to 10**	Part-whole model Bar model Numicon Ten frames Bead strings Number tracks	

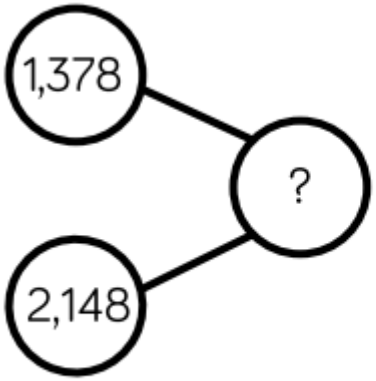
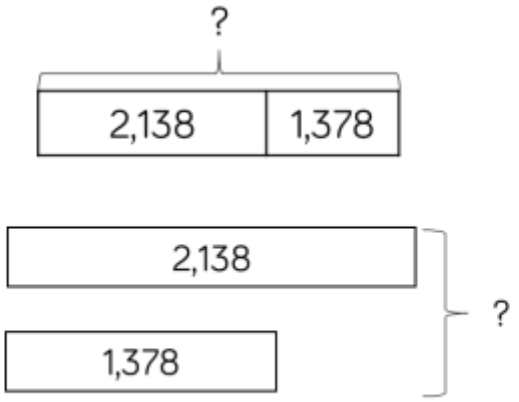
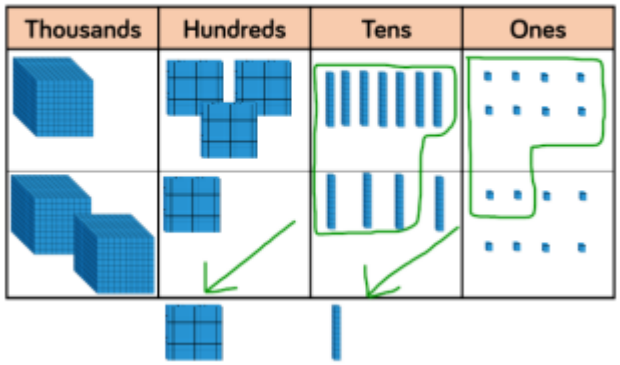
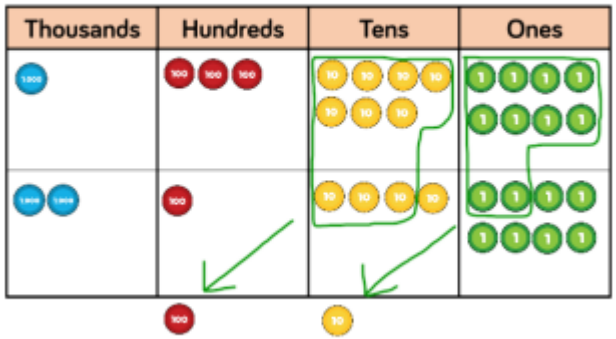
Year	Skill	Representations and Models	Examples
1	**Add 1 and 2-digit numbers to 20**	Part-whole model Bar model Numicon Ten frames Bead strings Number tracks Number lines (labelled) Straws	

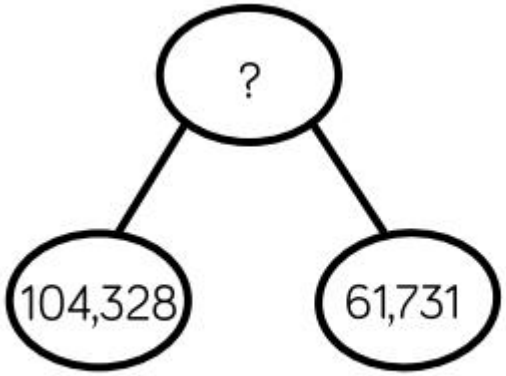
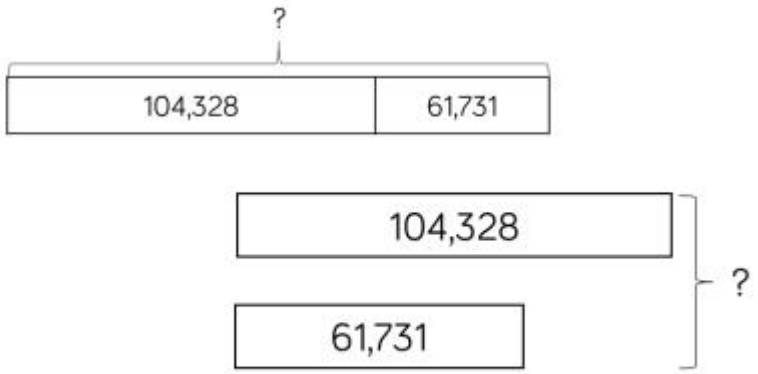
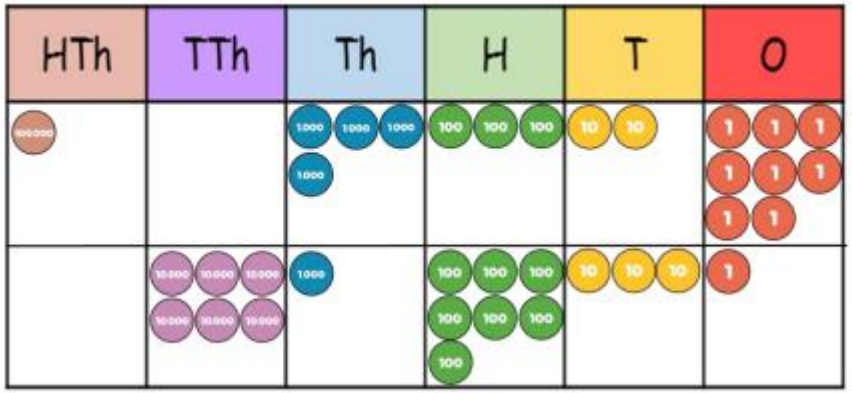
Year	Skill	Representations and Models	Examples
2	**Add three 1-digit numbers**	Part-whole model Bar model Ten frames Numicon	  $7 + 6 + 3 = 16$  

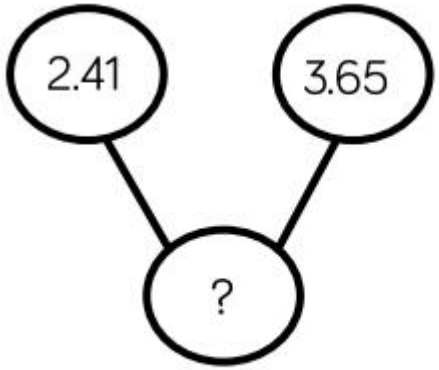
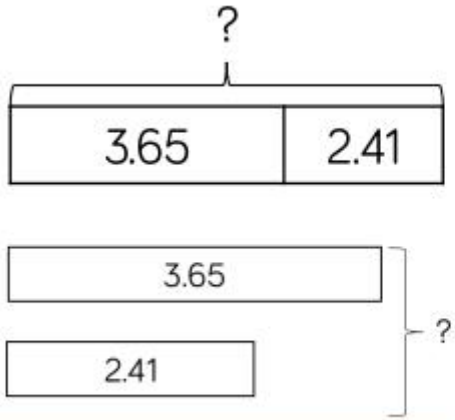
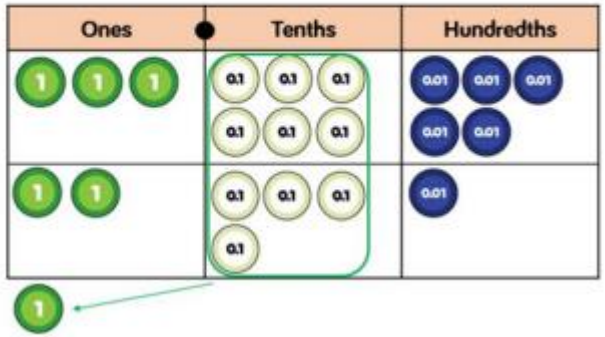
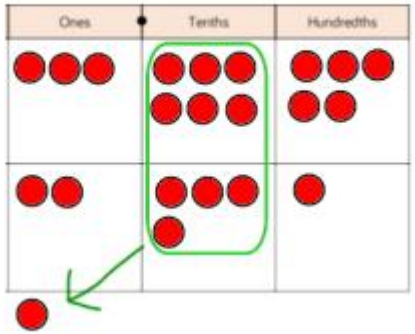
Year	Skill	Representations and Models	Examples
2	**Add 1 and 2-digit numbers to 100**	Part-whole model Bar model Number lines (labelled) Number lines (blank) Straws Hundred Square	    $38 + 5 = 43$  

Year	Skill	Representations and Models	Examples
2	**Add two 2-digit numbers**	Part-whole model Bar model Number lines Straws Base 10 Place value counters Column addition	   38 + 23 = 61  38 + 23 61 1 

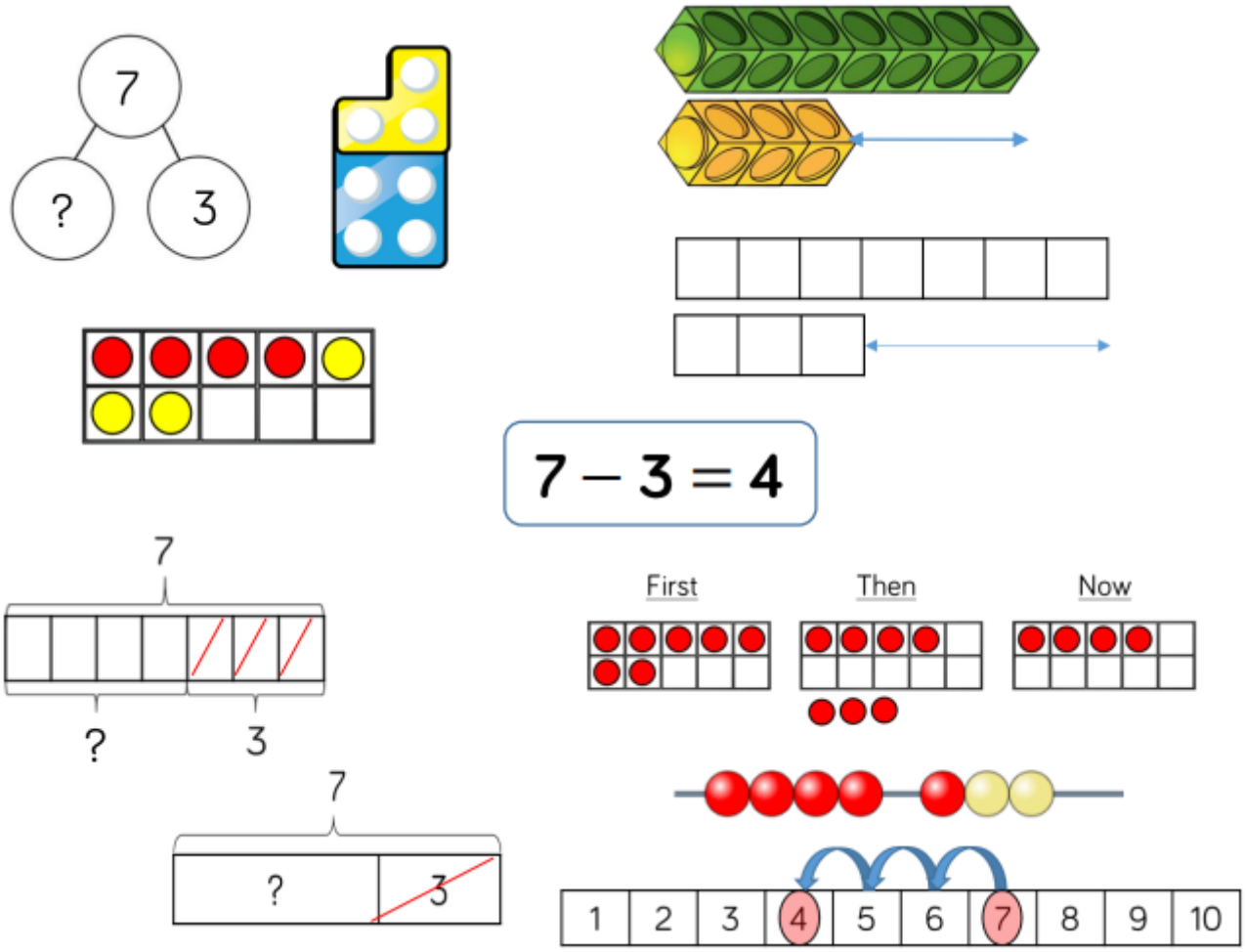
Year	Skill	Representations and Models	Examples
3	**Add with up to 3-digits**	Part-whole model Bar model Base 10 Place value counters Column addition	   $265 + 164 = 429$  265 + 164 429 1 

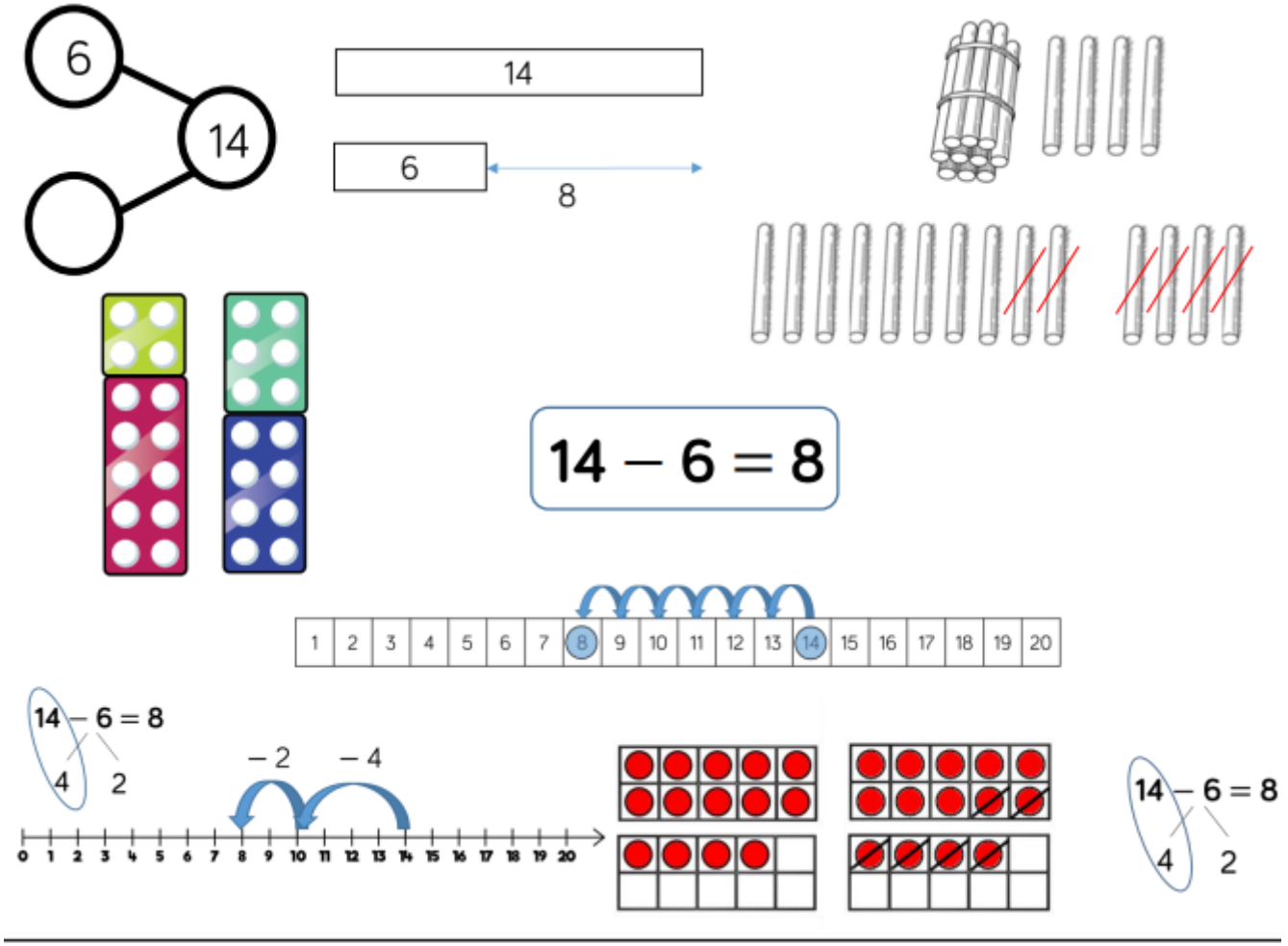
Year	Skill	Representations and Models	Examples
4	**Add with up to 4-digits**	Part-whole model Bar model Base 10 Place value counters Column addition	  1 3 7 8 + 2 1 4 8 3 5 2 6 1 1 **1,378 + 2,148 = 3,526**  

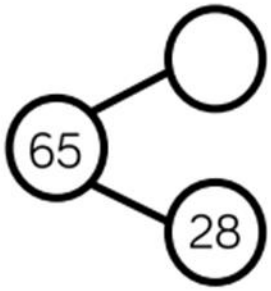
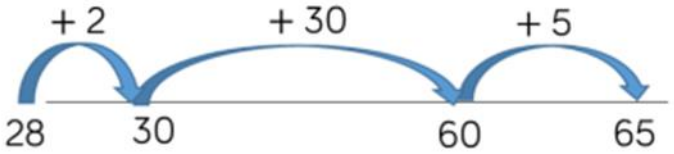
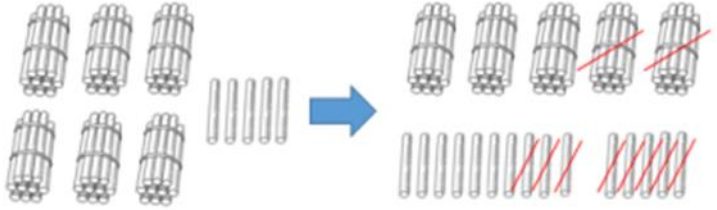
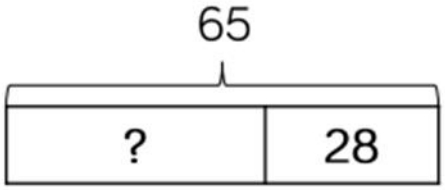
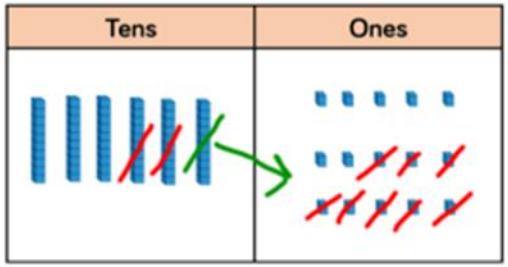
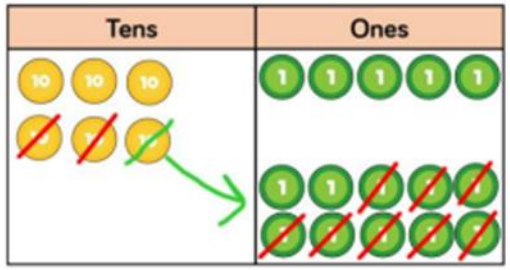
Year	Skill	Representations and Models	Examples
5/6	**Add with more than 4 digits**	Part-whole model Bar model Base 10 Place value counters Column addition	  **104,328 + 61,731 = 166,059**  1 0 4 3 2 8 + 6 1 7 3 1 1 6 6 0 5 9 1

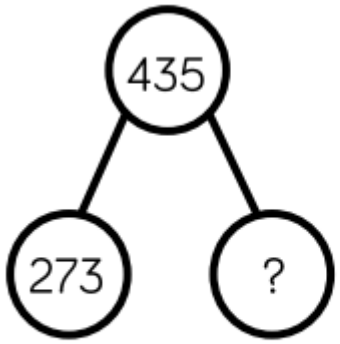
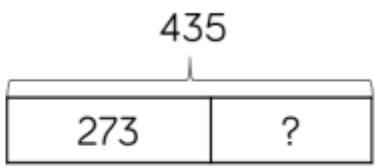
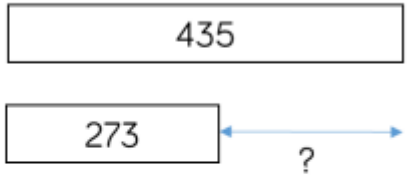
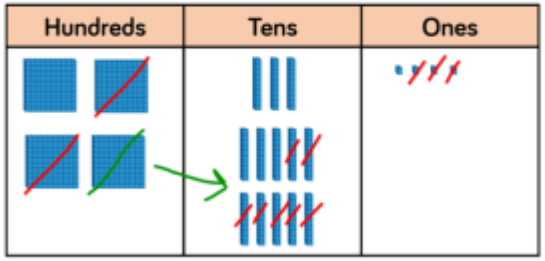
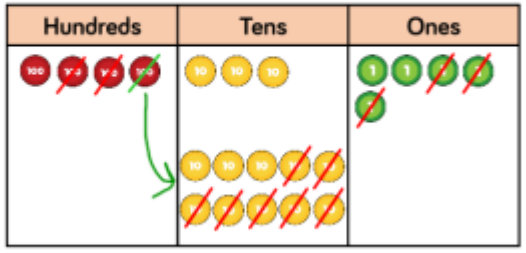
Year	Skill	Representations and Models	Examples
5/6	**Add with up to 3 decimal Places**	Part-whole model Bar model Base 10 Place value counters Column addition	  3.65 + 2.41 6.06 1 **3.65 + 2.41 = 6.06**  

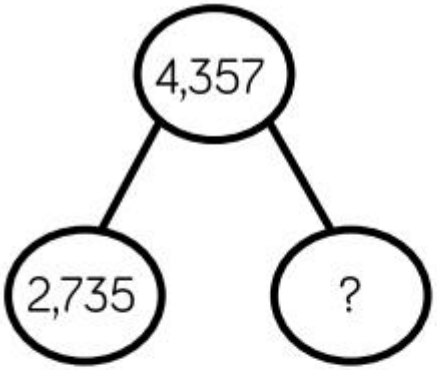
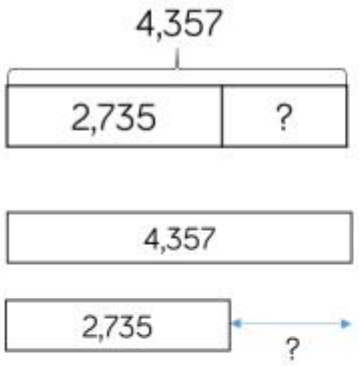
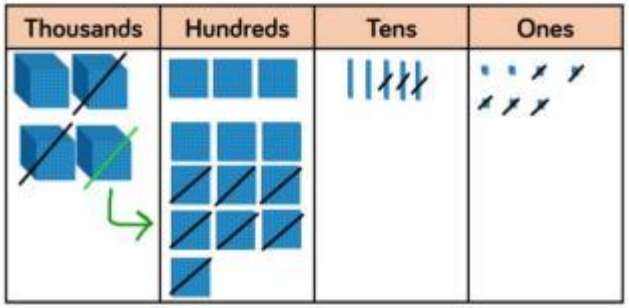
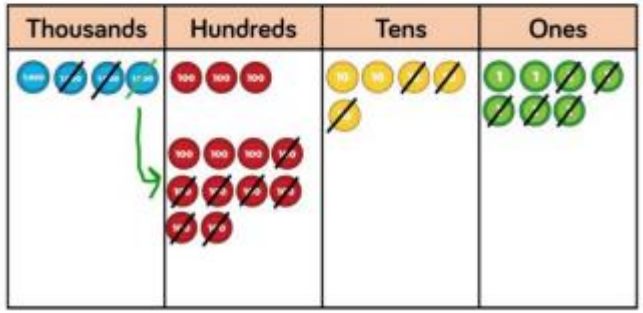
Subtraction

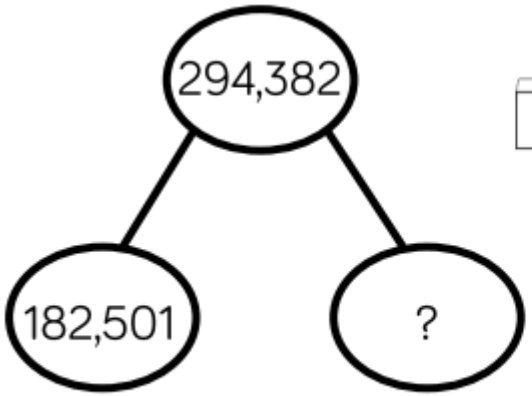
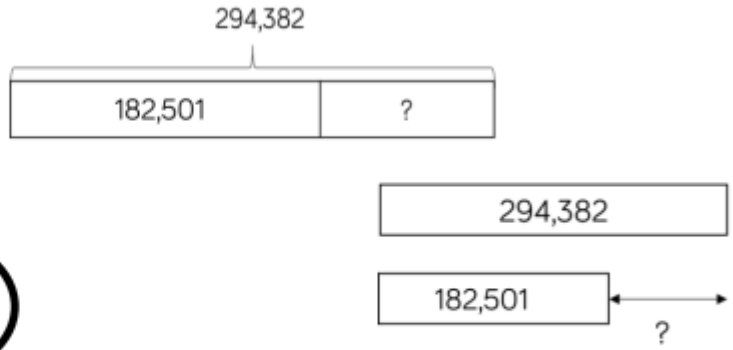
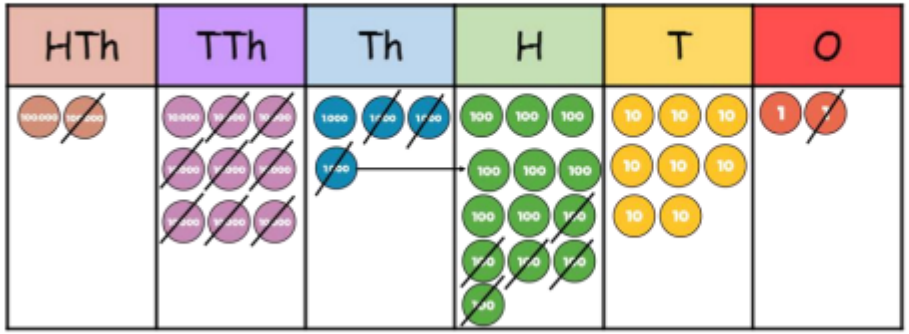
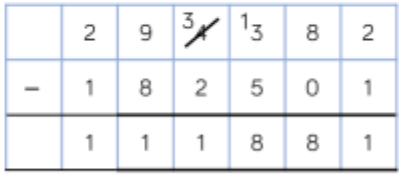
Year	Skill	Representations and Models	Examples
1	**Subtract two 1-digit numbers to 10**	Part-whole model Bar model Numicon Ten frames Bead strings Number tracks	

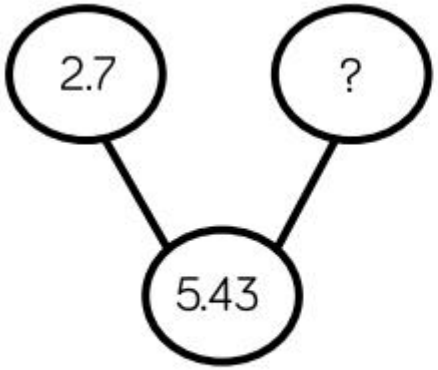
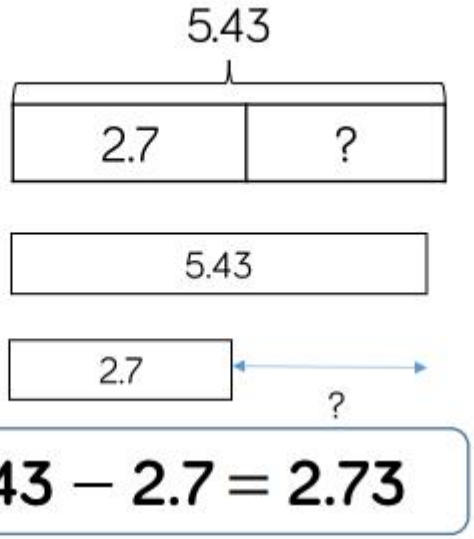
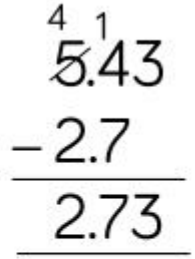
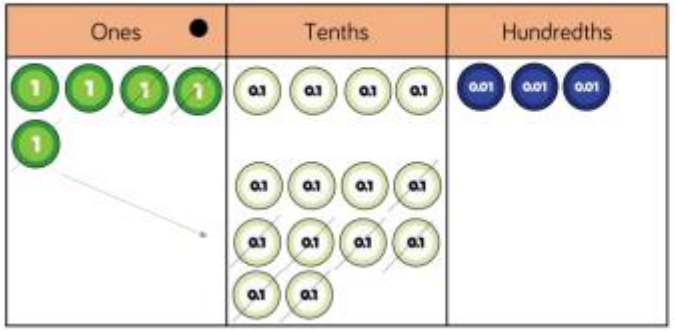
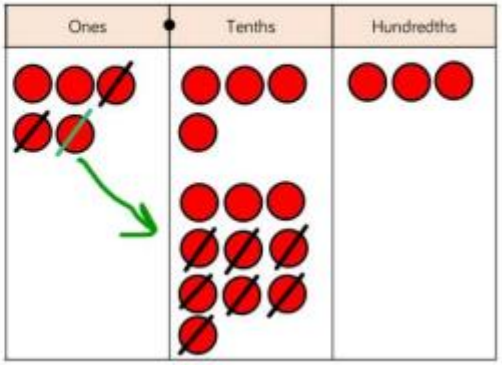
Year	Skill	Representations and Models	Examples
1/2	**Subtract 1 and 2-digit numbers to 20**	Part-whole model Bar model Numicon Ten frames Bead strings Number tracks Number lines (labelled) Straws Hundred square	

Year	Skill	Representations and Models	Examples
2	**Subtract two 2-digit numbers**	Part-whole model Bar model Number lines (blank) Straws Base 10 Place value counters Column subtraction	    $65 - 28 = 37$  $\begin{array}{r} {}^{5}\not{6}\,{}^{1}\not{5} \\ -\ 2\ 8 \\ \hline 3\ 7 \end{array}$ 

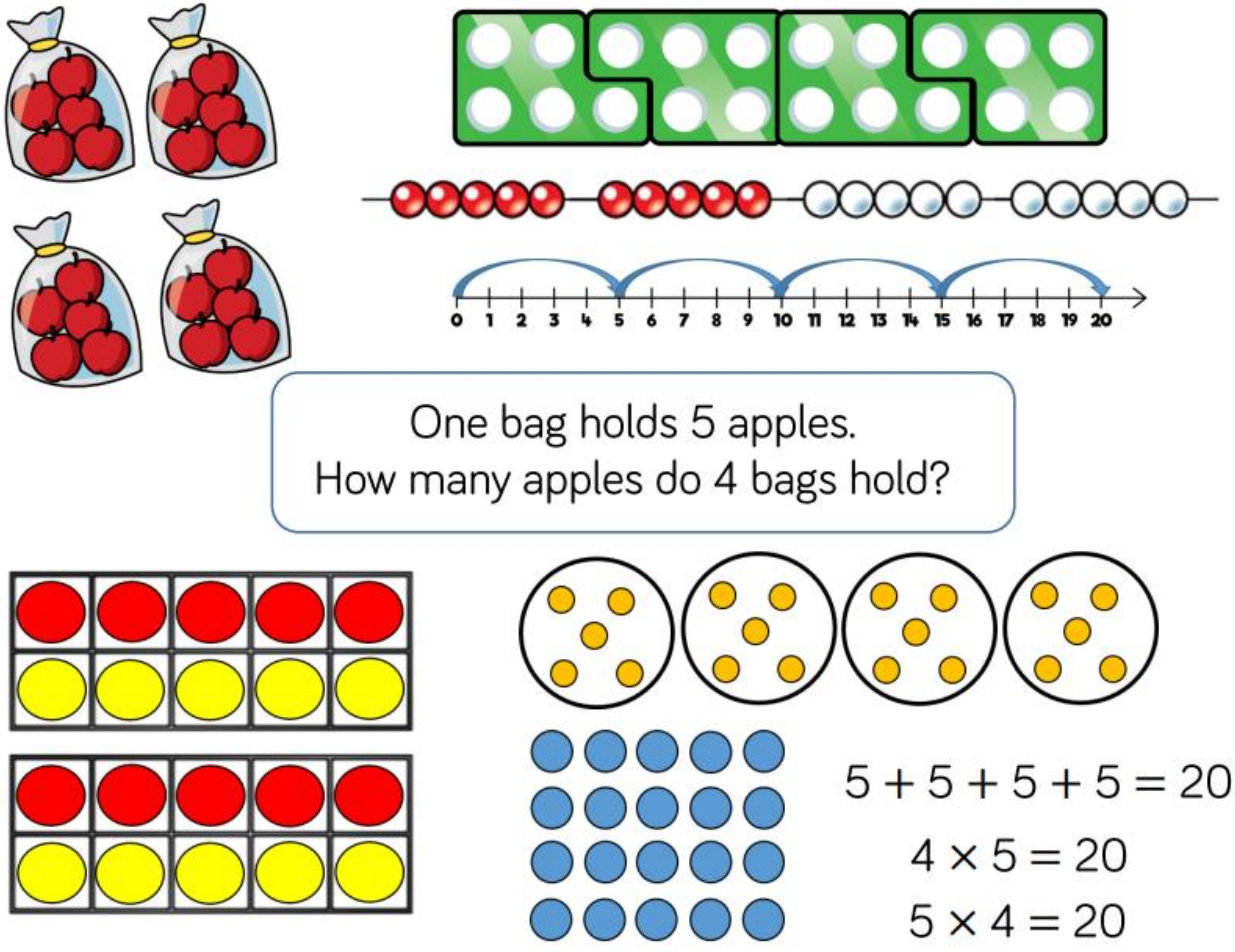
Year	Skill	Representations and Models	Examples
3	**Subtract with up to 3-digits**	Part whole model Bar model Base 10 Place value counters Column subtraction	   $435 - 273 = 262$  $\begin{array}{r} {}^{3}\not{4}{}^{1}\not{3}5 \\ -\ 273 \\ \hline 262 \end{array}$ 

Year	Skill	Representations and Models	Examples
4	**Subtract with up to 4-digits**	Part whole model Bar model Base 10 Place value counters Column subtraction	  3 1 4357 − 2735 1622 $4{,}357 - 2{,}735 = 1{,}622$  

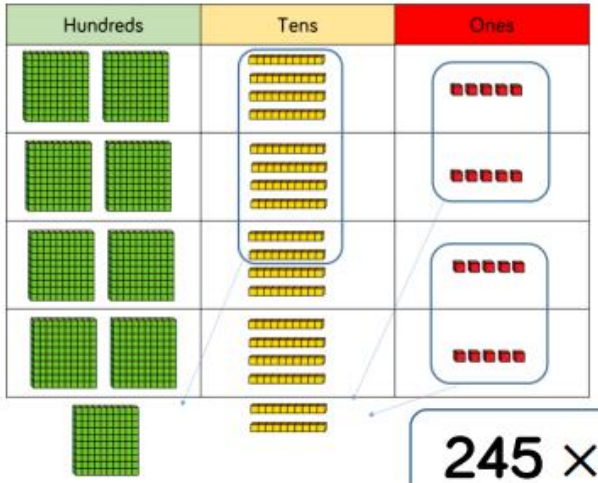
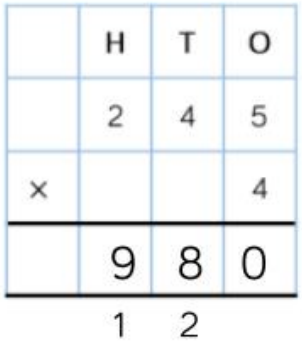
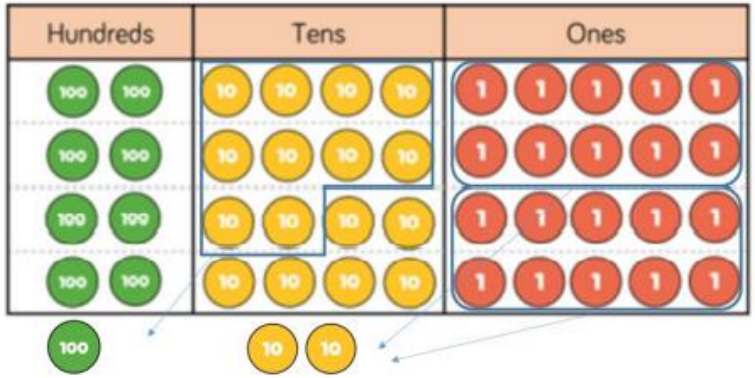
Year	Skill	Representations and Models	Examples
5/6	**Subtract with more than 4-digits**	Part whole model Bar model Place value counters Column subtraction	  294,382 − 182,501 = 111,881  

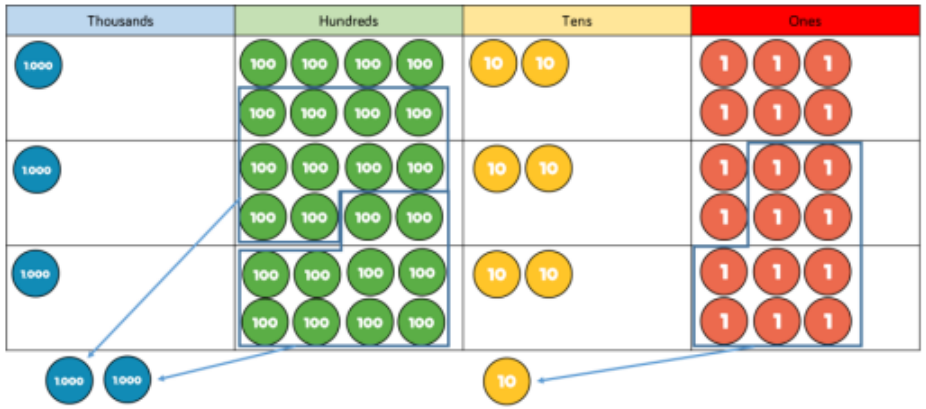
Year	Skill	Representations and Models	Examples
5/6	**Subtract with up to 3 decimal places**	Part whole model Bar model Place value counters Column subtraction	    

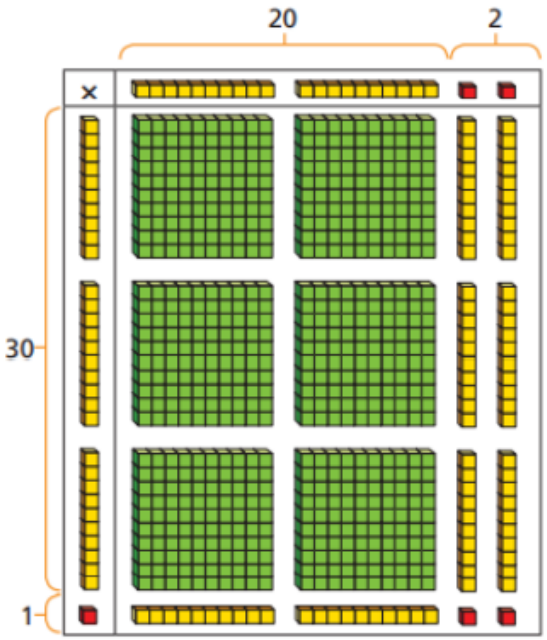
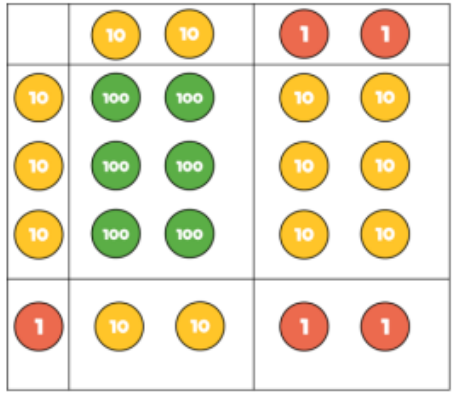
Multiplication

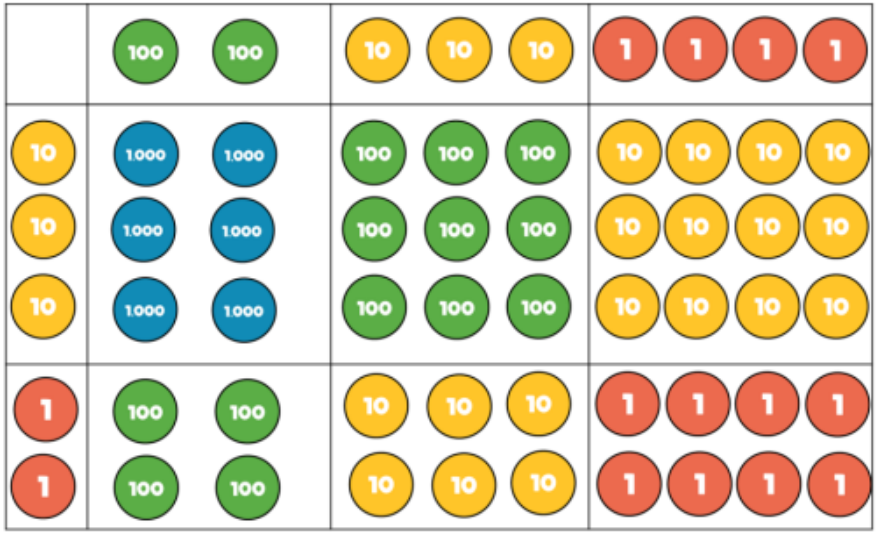
Year	Skill	Representations and Models	Examples
1/2	**Solve one-step problems with multiplication**	Bar model Numicon Counters Ten frames Bead strings Number lines	

Year	Skill	Representations and Models	Examples
3/4	**Multiply 2-digit by 1-digit numbers**	Place value counters Base 10 Expanded written method Short written method (column multiplication)	 H T O 3 4 × 5 2 0 (5 × 4) + 1 5 0 (5 × 30) 1 7 0 $34 \times 5 = 170$ H T O 3 4 × 5 1 7 0 1 2 

Year	Skill	Representations and Models	Examples
4	**Multiply 3-digit by 1-digit numbers**	Place value counters Base 10 Short written method (column multiplication)	  $245 \times 4 = 980$ 

Year	Skill	Representations and Models	Examples
5	**Multiply 4-digit by 1-digit numbers**	Place value counters Short written method (column multiplication)	 $1{,}826 \times 3 = 5{,}478$ |	Th	H	T	O
---	---	---	---	---
	1	8	2	6
×				3
	5	4	7	8
	2		1		 2 1

Year	Skill	Representations and Models	Examples
5	**Multiply 2-digit by 2-digit numbers**	Place value counters Base 10 Formal written method (column multiplication) Grid method	  | × | 20 | 2 | |---|---|---| | 30 | 600 | 60 | | 1 | 20 | 2 | | | H | T | O | |---|---|---|---| | | | 2 | 2 | | × | | 3 | 1 | | | | 2 | 2 | | | 6 | 6 | 0 | | | 6 | 8 | 2 | $22 \times 31 = 682$

Year	Skill	Representations and Models	Examples
5	**Multiply 2-digit by 3-digit numbers**	Place value counters Formal written method (column multiplication) Grid method	

Th	H	T	O
	2	3	4
×		3	2
	4	6	8
$^{1}7$	$^{1}0$	2	0
7	4	8	8

$234 \times 32 = 7{,}488$

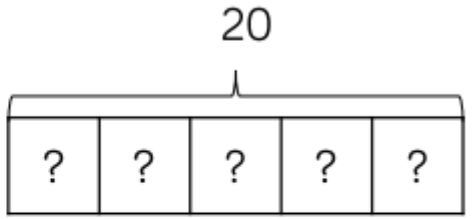
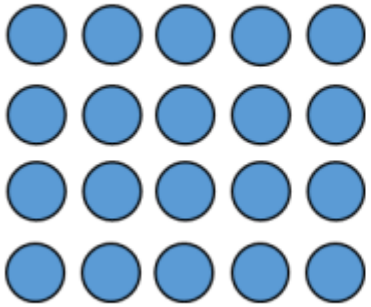
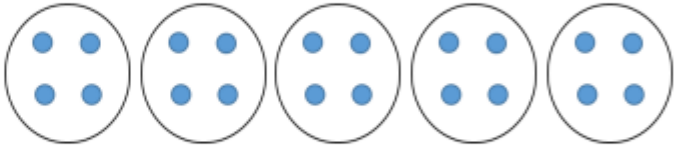
×	200	30	4
30	6,000	900	120
2	400	60	8

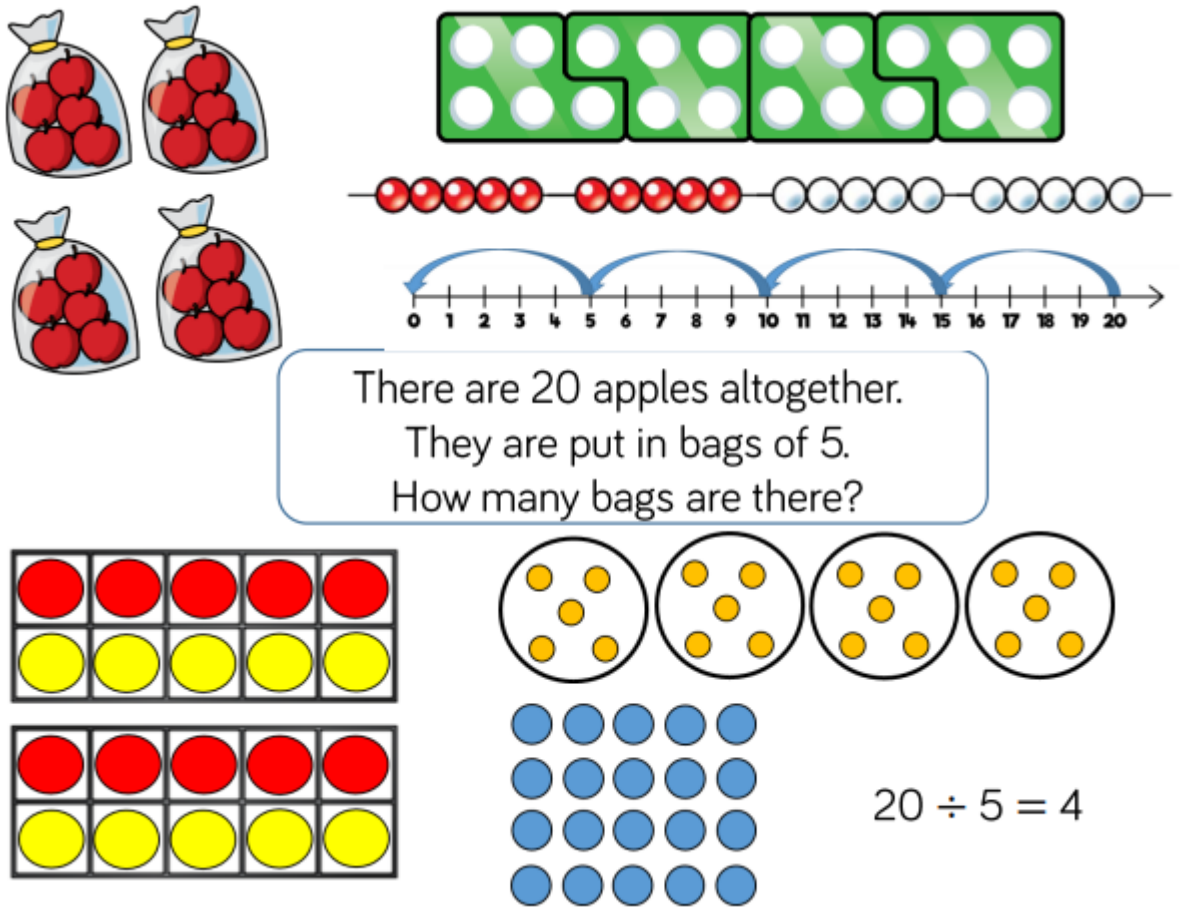
Year	Skill	Representations and Models	Examples
5/6	**Multiply 2-digit by 4-digit numbers**	Formal written method (column multiplication)	

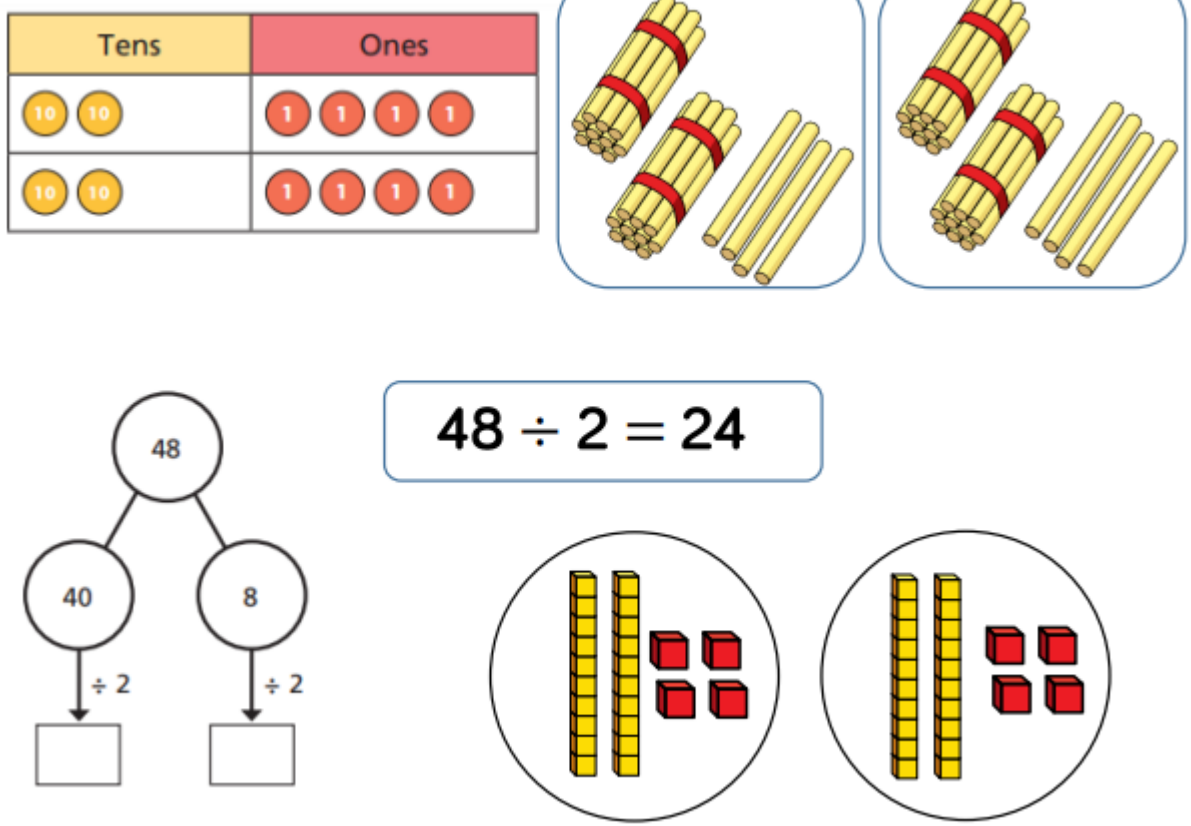
TTh	Th	H	T	O
	2	7	3	9
×			2	8
2 (2)	1 (5)	9 (3)	1 (7)	2
5 (1)	4	7 (1)	8	0
7	6	6	9	2
		1		

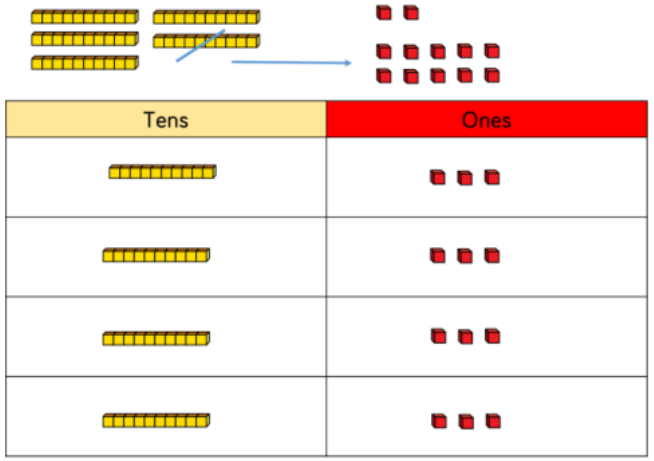
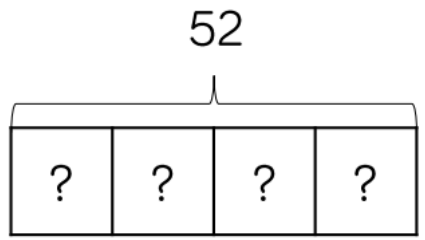
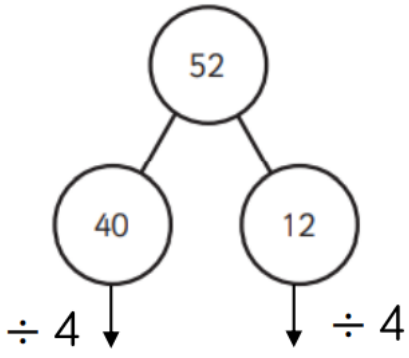
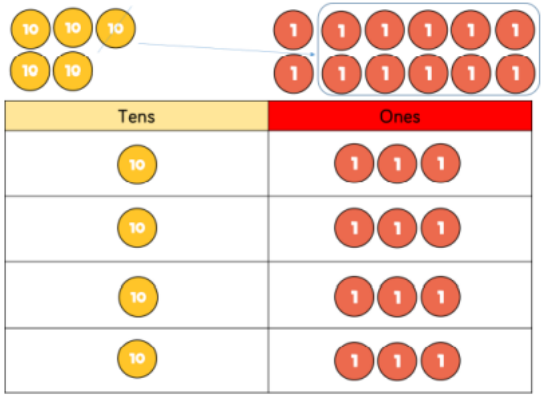
$$2{,}739 \times 28 = 76{,}692$$

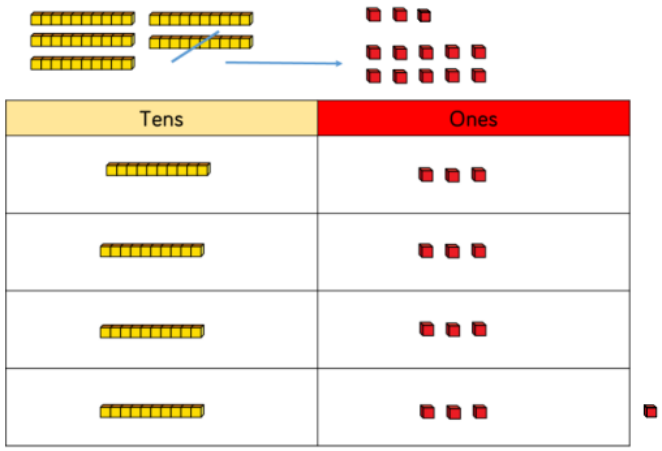
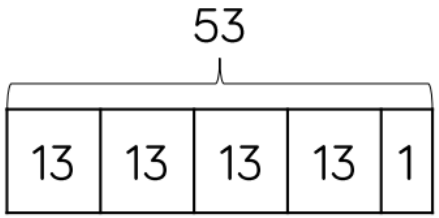
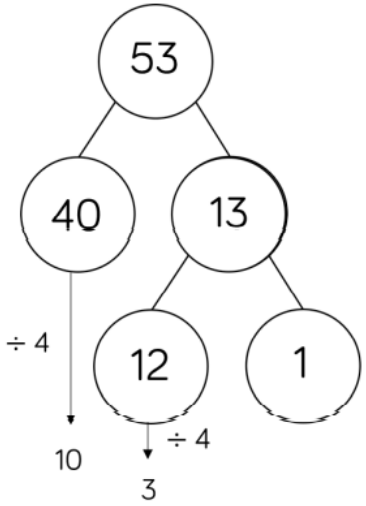
Division

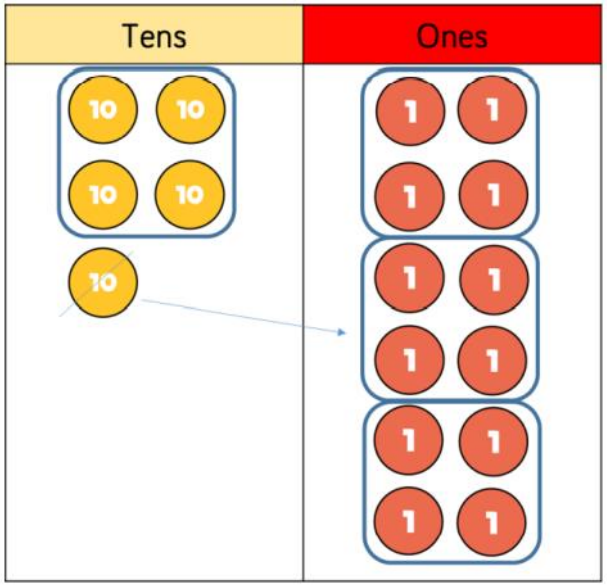
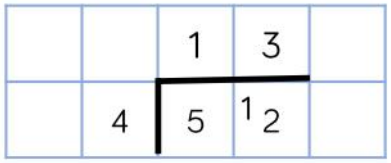
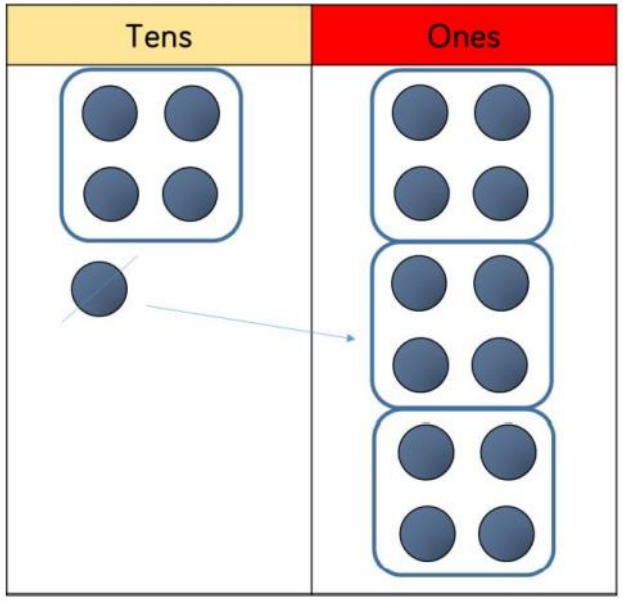
Year	Skill	Representations and Models	Examples
1/2	**Solve one-step problems with division (sharing)**	Bar model Real life objects Arrays Counters	  There are 20 apples altogether. They are shared equally between 5 bags. How many apples are in each bag?   $20 \div 5 = 4$

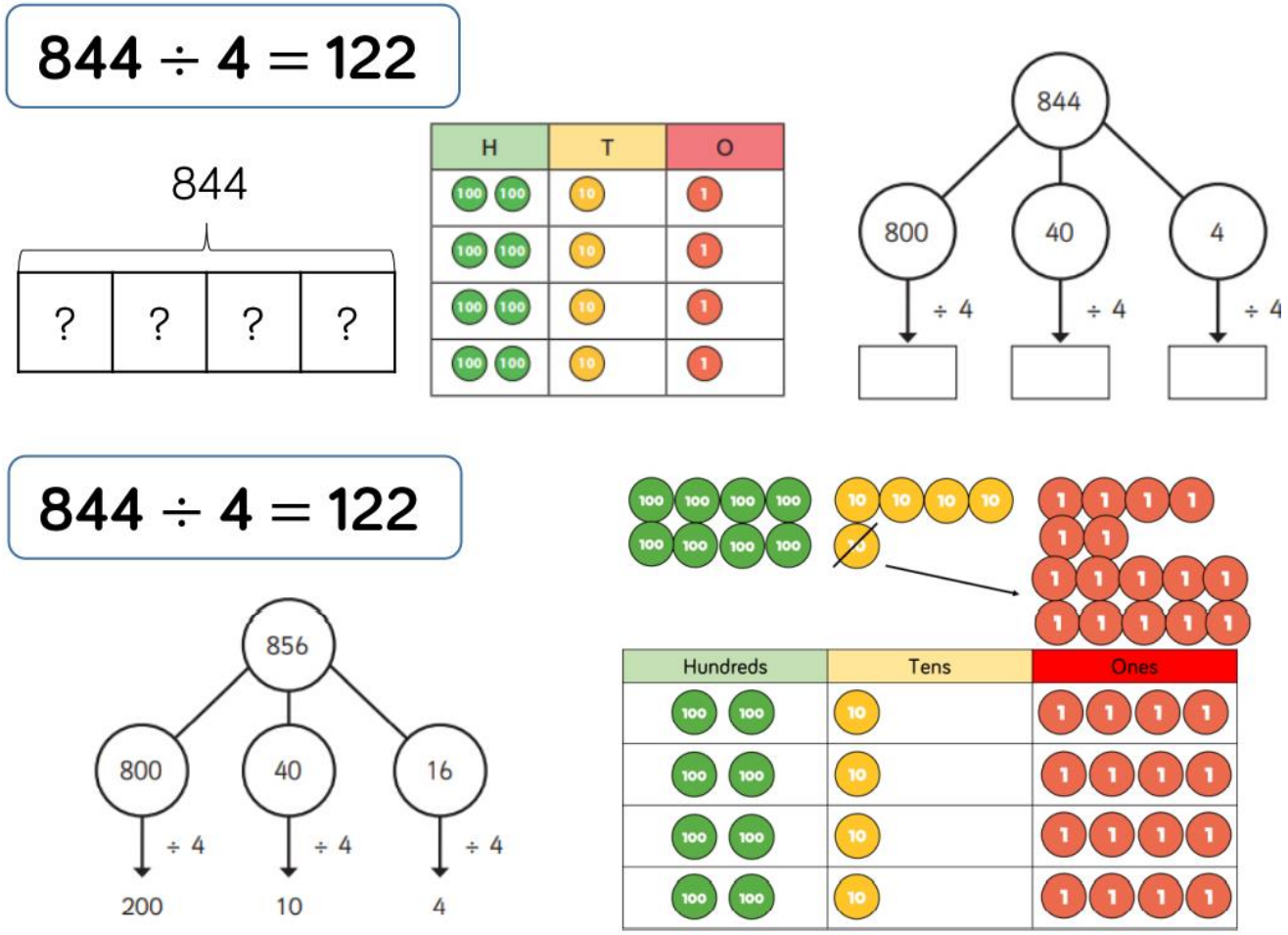
Year	Skill	Representations and Models	Examples
1/2	**Solve one-step problems with division (grouping)**	Real life objects Numicon Bead strings Ten frames Number lines Arrays Counters	

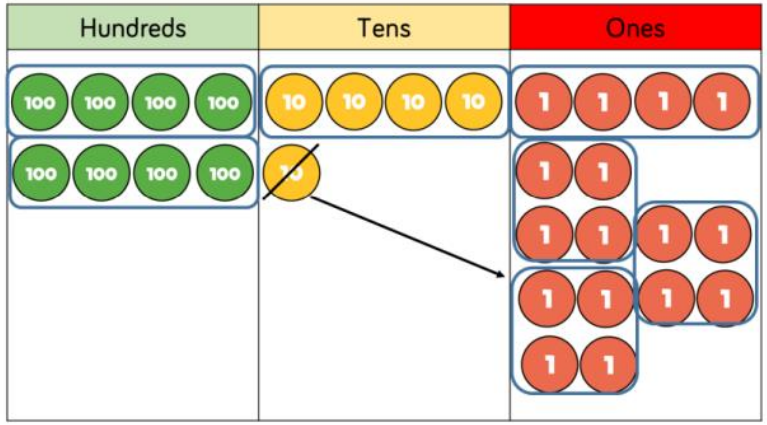
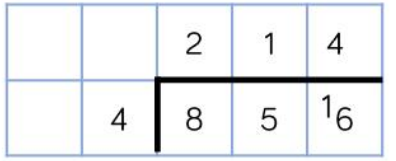
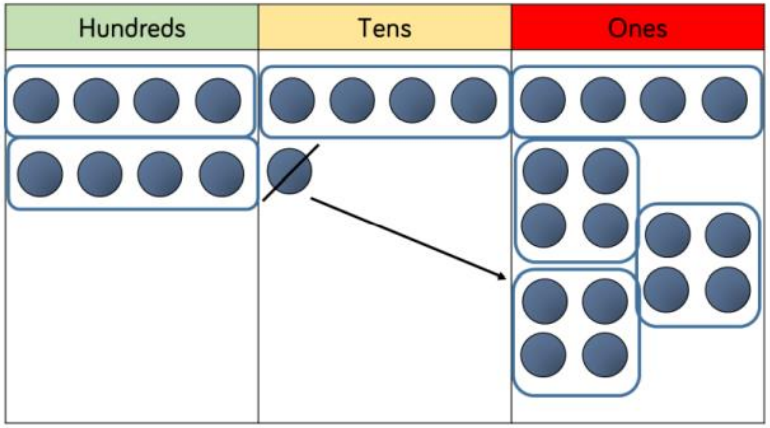
Year	Skill	Representations and Models	Examples
3	**Divide 2-digits by 1-digit (no exchange sharing)**	Straws Base 10 Bar model Place value counters Part-whole model	

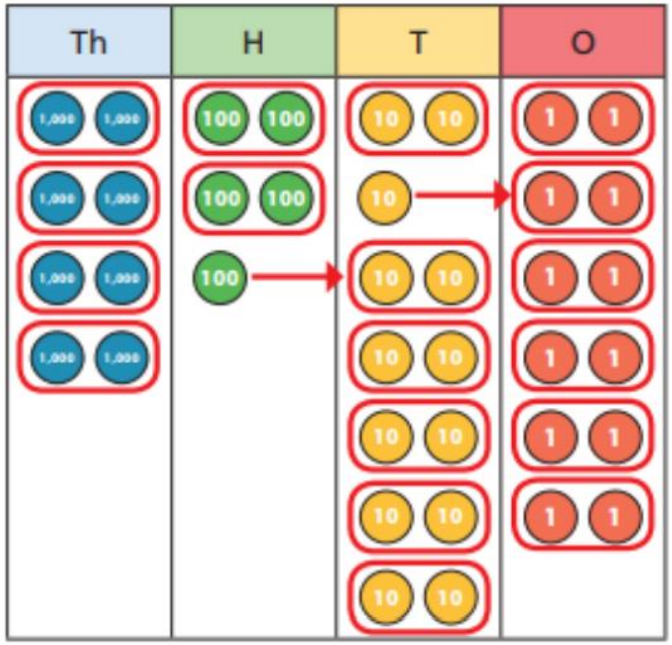
Year	Skill	Representations and Models	Examples
3	**Divide 2-digits by 1-digit (sharing with exchange)**	Straws Base 10 Bar model Place value counters Part-whole model	  $52 \div 4 = 13$  $10 + 3 = 13$ 

Year	Skill	Representations and Models	Examples
3/4	**Divide 2-digits by 1-digit (sharing with remainders)**	Straws Base 10 Bar model Place value counters Part-whole model	   **53 ÷ 4 = 13 r1** 

Year	Skill	Representations and Models	Examples
4/5	**Divide 2-digits by 1-digit (grouping)**	Place value counters Counters Place value grid Written short division (bus stop)	   $52 \div 4 = 13$

Year	Skill	Representations and Models	Examples
4	**Divide 3-digits by 1-digit (sharing with exchange)**	Base 10 Bar model Place value counters Part-whole model	

Year	Skill	Representations and Models	Examples
4/5	**Divide 3-digits by 1-digit (grouping)**	Place value counters Counters Place value grid Written short division (bus stop)	   856 ÷ 4 = 214

Year	Skill	Representations and Models	Examples
5	**Divide 4-digits by 1-digit (grouping)**	Place value counters Counters Place value grid Written short division (bus stop)	 $8{,}532 \div 2 = 4{,}266$

	4	2	6	6
2	8	5	$^{1}3$	$^{1}2$

Year	Skill	Representations and Models	Examples
6	**Divide multi-digits by 2-digits (short division)**	Written short division (bus stop) List of multiples	

		0	3	6
	12	4	$^{4}3$	$^{7}2$

$$432 \div 12 = 36$$

$$7{,}335 \div 15 = 489$$

	0	4	8	9
15	7	$^{7}3$	$^{13}3$	$^{13}5$

15	30	45	60	75	90	105	120	135	150

Year	Skill	Representations and Models	Examples
6	**Divide multi-digits by 2-digits (long division)**	Written long division List of multiples	

		0	3	6	
1	2	4	3	2	(×30)
	–	3	6	0	
			7	2	(×6)
	–		7	2	
				0	

$12 \times 1 = 12$
$12 \times 2 = 24$
$12 \times 3 = 36$
$12 \times 4 = 48$
$12 \times 5 = 60$
$12 \times 6 = 72$
$12 \times 7 = 84$
$12 \times 8 = 96$
$12 \times 7 = 108$
$12 \times 10 = 120$

$432 \div 12 = 36$

$7{,}335 \div 15 = 489$

	0	4	8	9	
15	7	3	3	5	
–	6	0	0	0	(×400
	1	3	3	5	
–	1	2	0	0	(×80)
		1	3	5	
–		1	3	5	(×9)
				0	

$1 \times 15 = 15$
$2 \times 15 = 30$
$3 \times 15 = 45$
$4 \times 15 = 60$
$5 \times 15 = 75$
$10 \times 15 = 150$