The Good Shepherd Catholic Primary School

Following Jesus,

The Good Shepherd,

in all we say and do

Year 2 Calculation Policy

2024 – 2025

OUR LADY IMMACULATE CATHOLIC ACADEMIES TRUST

Year 2			
	Block 1	Block 2	Block 3
Calculation content	ADDITION AND SUBTRACTION (UNIT 1) • Number bonds for 20 (r) • Add a two-digit number and ones – no exchanging • Add multiples of ten • Friendly number pairs • Subtract ones from a two-digit number – no exchanging • Subtract multiples of ten • Subtract ones from a multiple of ten • Add single digit numbers bridging ten (eg 8 + 6) • Subtract single digit numbers from 11-18 bridging ten (eg 15 – 8)	MONEY (UNIT 1) • Finding the total (two-digit amount + 1 digit amount (no exchanging); add multiples of ten pence; adding single digit pounds bridging ten pounds) • Change (change from 20p; change from 50p) ADDITION AND SUBTRACTION (UNIT 2) • Add a two-digit number and ones – bridging the next ten (eg 28 + 6) • Add 3 one-digit numbers • Subtract ones from a two-digit number – making the previous ten (eg 25 – 8) • Adding 2 two-digit numbers • Subtracting a two-digit number from a multiple of ten • Subtracting a two-digit number from a two-digit number	CALCULATION UNIT • Adding two 2-digit numbers (r) • Subtracting a 2-digit number from a 2-digit number (r) MONEY (UNIT 2) • Adding coins (finding different combinations to make totals) • Adding notes (adding multiples of ten and five) • Subtracting amounts of money (eg £60 - £15 = £60 - £10 - £5)

Year 2			
	Block 1	Block 2	Block 3
Strategies/ methods	<u>Number bonds for 20</u> Partitioning first addend into tens and ones then combining ones, eg: 18 + 2 = 10 + 8 + 2. NB Number bonds for 20 are revisited early on in the Block 2 unit on money. <u>Add a two-digit number and ones – no exchanging</u> Counting on; partitioning first addend into tens and ones, then combining ones; column method. <u>Add multiples of ten</u> Use known facts, eg: 3 + 2 = 5 so 3 tens + 2 tens = 5 tens. <u>Friendly number pairs</u> Friendly numbers fit together to make a number that is easy to work with. Re-ordering is often used to simplify calculations. Eg: 14 + 30 + 6 becomes 14 + 6 + 30 which becomes 20 + 30.	<u>Finding the total</u> Two-digit amount + 1 digit amount (no exchanging) using partitioning, eg: 54p + 5p = 50p + 4p + 5p. Column method used as well. Add multiples of ten pence using representations of coins. Adding single digit pounds bridging ten pounds, eg: £8 + £6 = £8 + £2 + £4 <u>Change</u> Change from 20p using tens frames and recall of number bonds for 20. Change from 50p using base 10 and mental calculation to subtract multiples of five and ten from 50p.	<u>Calculation unit</u> Revisits methods from Block 2. <u>Adding coins</u> Children use their mental calculation skills to find totals supported by representations of coins. <u>Adding notes</u> Children use their mental calculation skills to add multiples of ten and five pounds supported by representations of bank notes. <u>Subtracting amounts of money</u> Children subtract amounts using notes and coins. The core strategy is to partition the subtrahend, eg: £60 - £15 = £60 - £10 - £5

Year 2			
	Block 1	Block 2	Block 3
Strategies/ methods	<u>Subtract ones from a two-digit number – no exchanging</u> Counting back; partitioning minuend; column method. <u>Subtract multiples of ten</u> Use known facts, eg: 5 – 2 = 3 so 5 tens - 2 tens = 3 tens. <u>Subtract ones from a multiple of ten</u> Use known facts, eg: 10 – 2 = 8 so 30 – 2 = 28. <u>Add single digit numbers bridging ten</u> Making the next ten, eg: 8 + 6 = 8 + 2 + 4. <u>Subtract single digit numbers from 11-18 bridging ten</u> Making the previous ten, eg: 15 – 8 = 15 – 5 – 3.	<u>Add a two-digit number and ones</u> Making the next ten, eg: 28 + 6 = 28 + 2 + 4; expanded column method; compact column method. <u>Add 3 one-digit numbers</u> Add 3 one-digit numbers Children use their developing ability to make the next ten to add 3 onedigit numbers. The core representation is the tens frame, eg: 9 + 7 + 5 = 16 + 5 = 16 + 4 + 1 = 21 <u>Subtract ones from a two-digit number</u> Making the previous ten; compact column method. <u>Adding 2 two-digit numbers</u> Partitioning addends into tens and ones and combining; expanded column method; compact column method.	

Year 2			
	Block 1	Block 2	Block 3
Strategies/ methods		<u>Subtracting a two-digit number from a multiple of ten</u> Partitioning the subtrahend, eg: 30 – 19 = 30 – 10 – 9. <u>Subtracting a two-digit number from a two-digit number</u> Partitioning the subtrahend; compact column method.	

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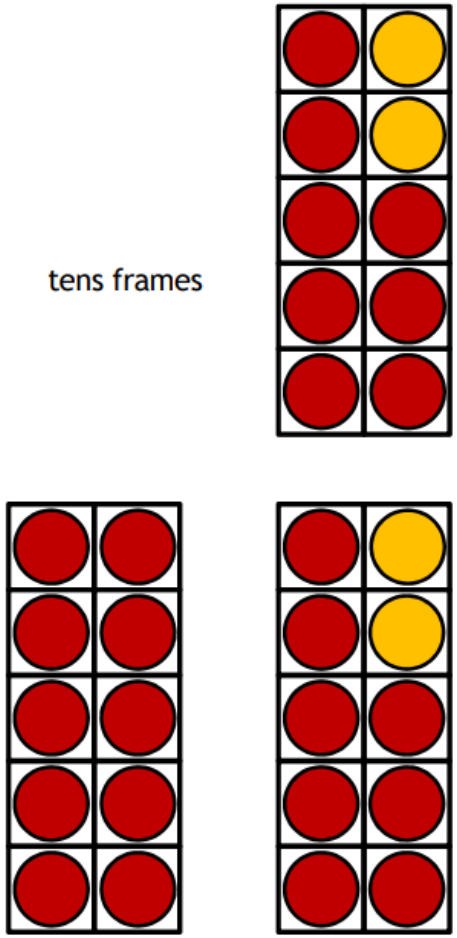
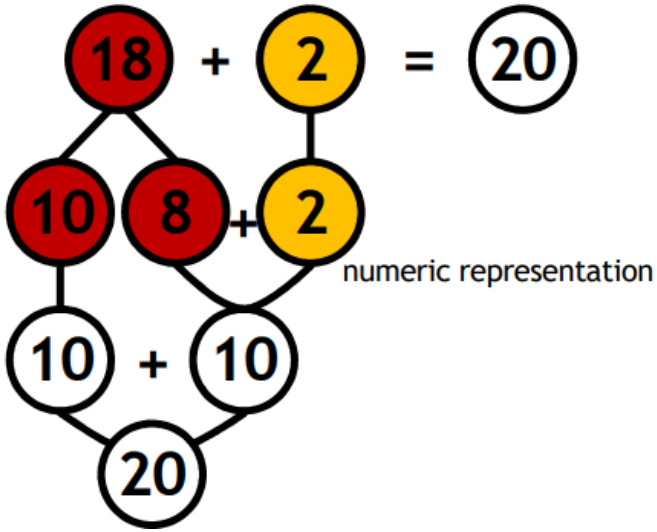
Year 2 - Block 1 | 8 + 2 = 10 • 18 + 2 = 20

Number bonds for 20

tens frames



8 + 2 = 10



numeric representation

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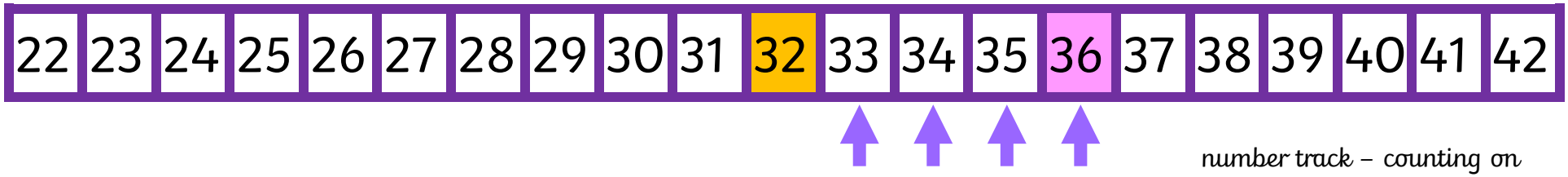
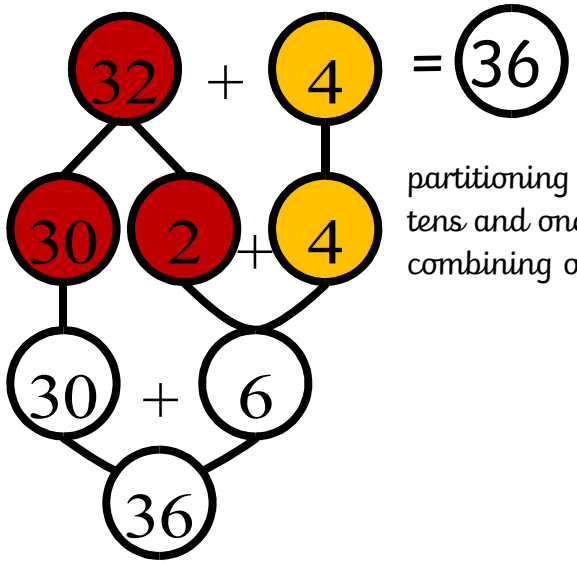
Year 2 - Block 1 | **32 + 4 = 36**

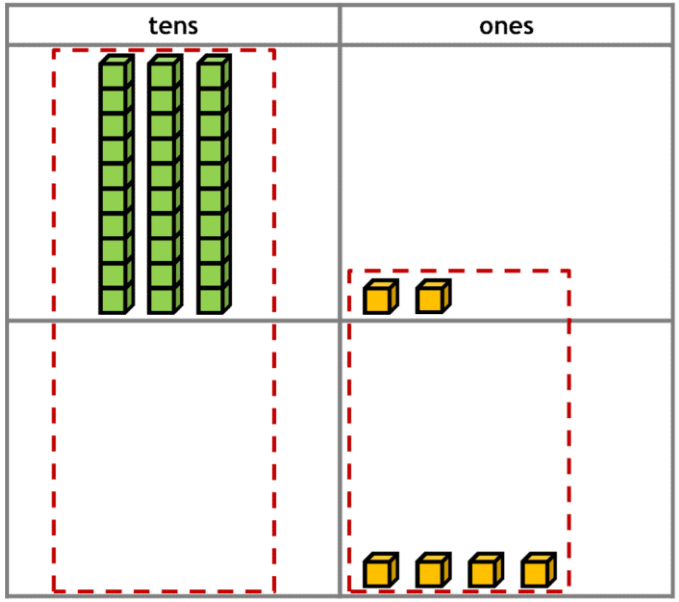
Add a two-digit number and ones – no exchanging



number track – counting on



partitioning first addend into tens and ones, then combining ones



Add the ones

Add the tens

	3	2
+		4
	3	6

column method supported by base ten

Year 2 - Block 1 | 3 + 2 = 5 • 30 + 20 = 50

Add multiples of ten

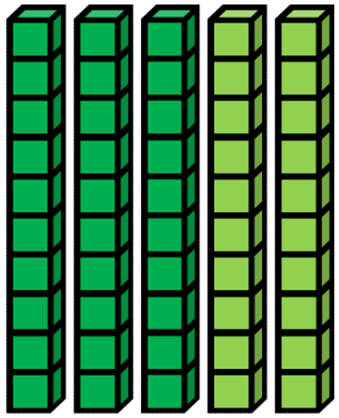
3 + 2 =

3 ones + 2 ones =

5

5 ones

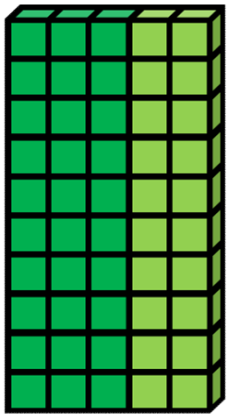
30 + 20 =



3 tens + 2 tens =

30 + 20 =

50



5 tens

50

Base ten supports understanding of scaling

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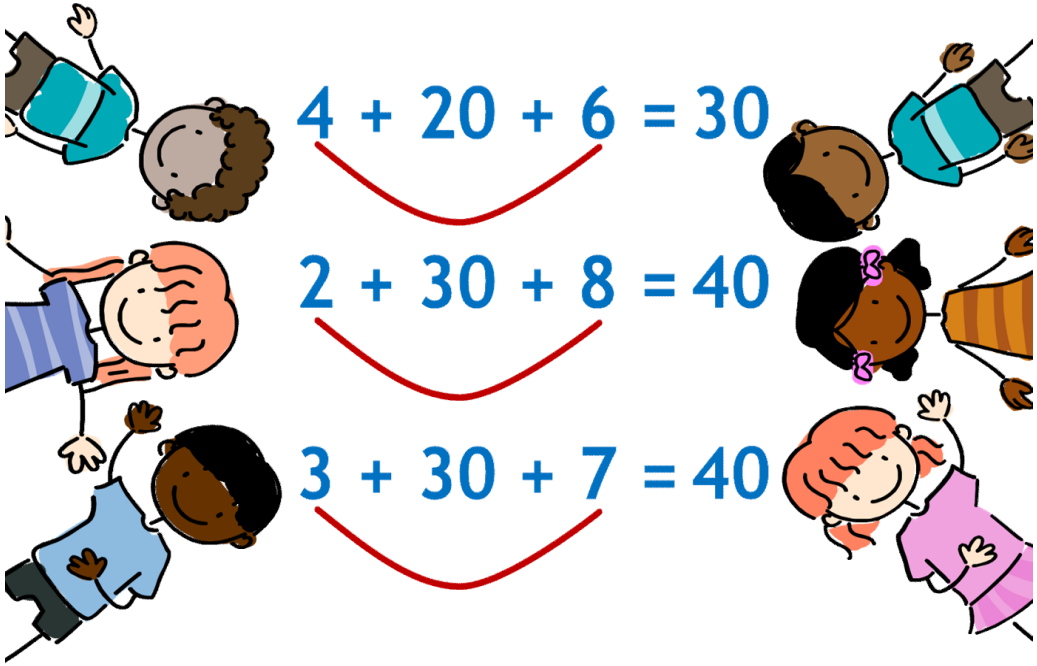
Year 2 - Block 1

Friendly number pairs



number bonds from Year 1

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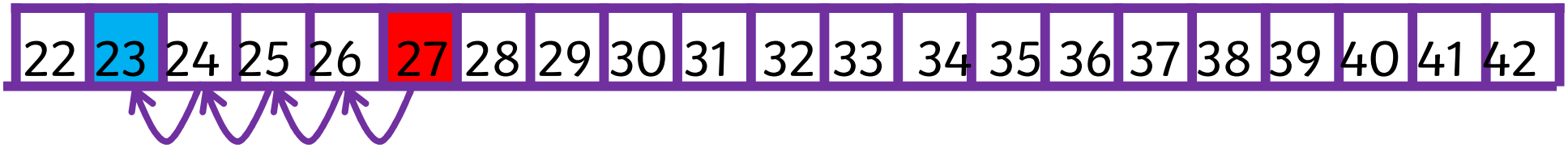
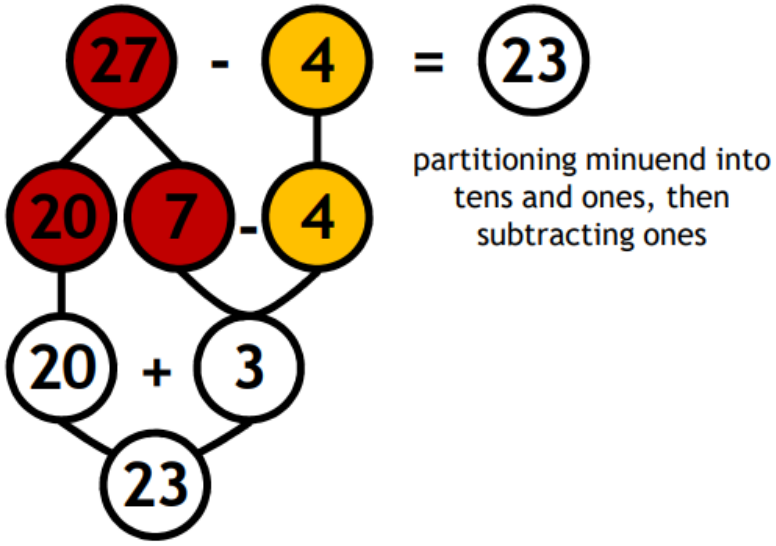
Year 2 - Block 1

27 - 4 = 23

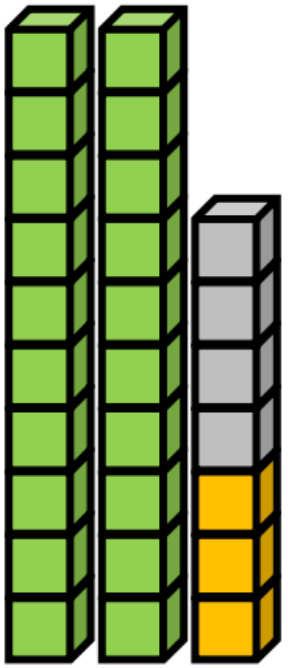
Subtract ones from a two-digit number – no exchanging



number track – counting back



partitioning minuend into tens and ones, then subtracting ones



	2	7
–		4
	2	3

Subtract the ones

Subtract the tens

There are no tens to subtract...

column method supported by base ten

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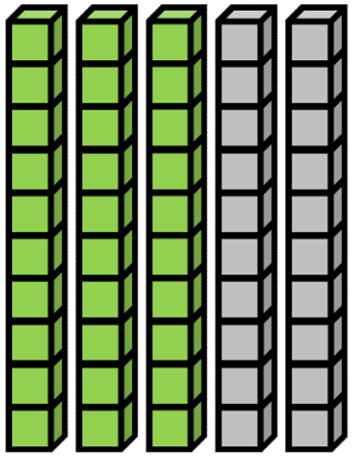
Year 2 - Block 1 | 5 - 2 = 3 • 50 - 20 = 30

Subtract multiples of ten

5 - 2 = 3

5 ones - 2 ones = 3 ones

50 - 20 = 30



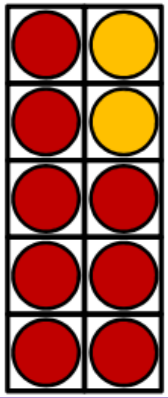
5 tens - 2 tens = 3 tens

50 - 20 = 30

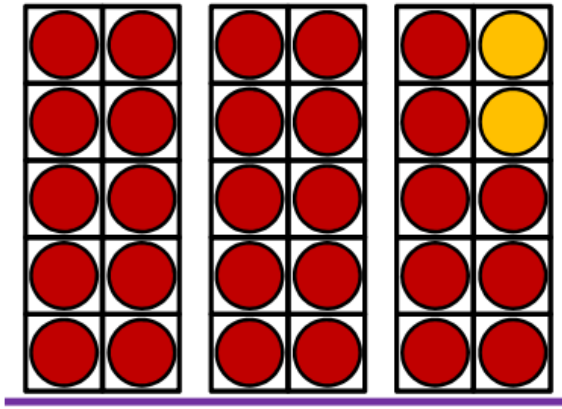
base ten supports understanding of scaling

Year 2 - Block 1 | 10 - 2 = 8 • 30 - 2 = 28

Subtract ones from a multiple of ten



10 - 2 = 8



30 - 2 = 28

tens frames representations support understanding of related facts

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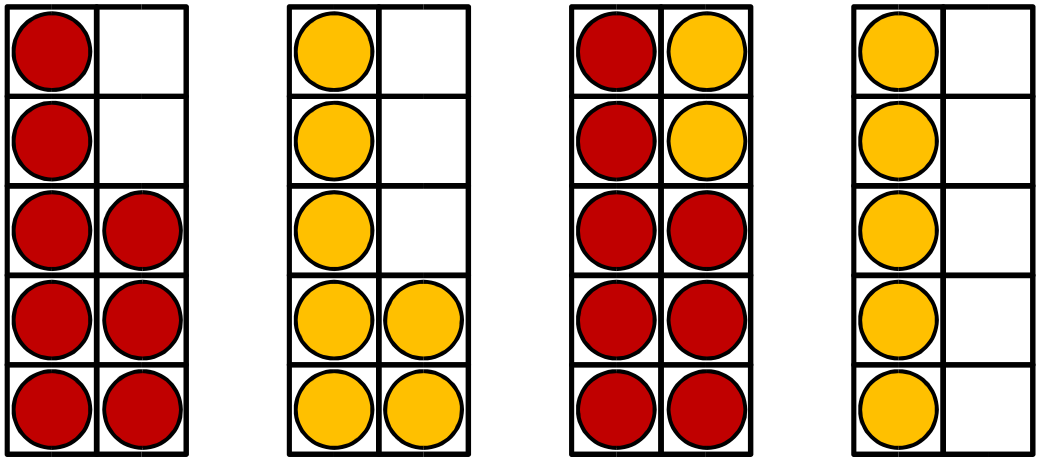
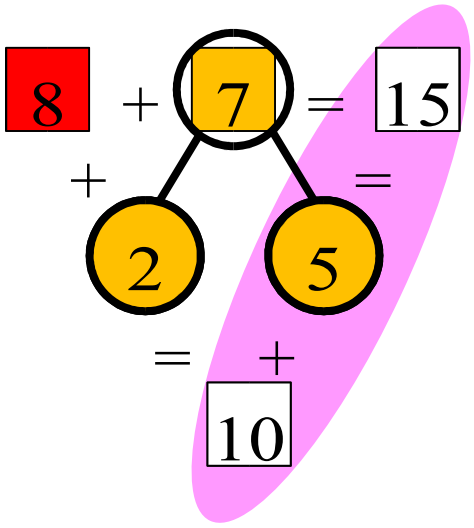
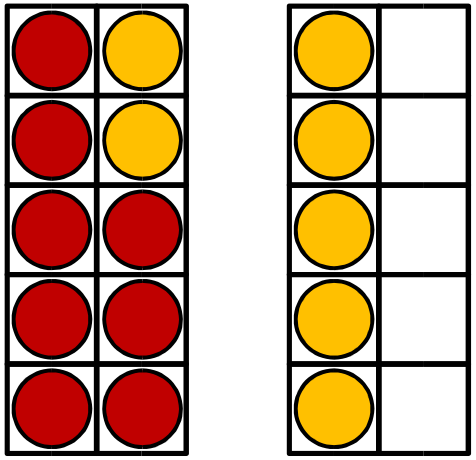
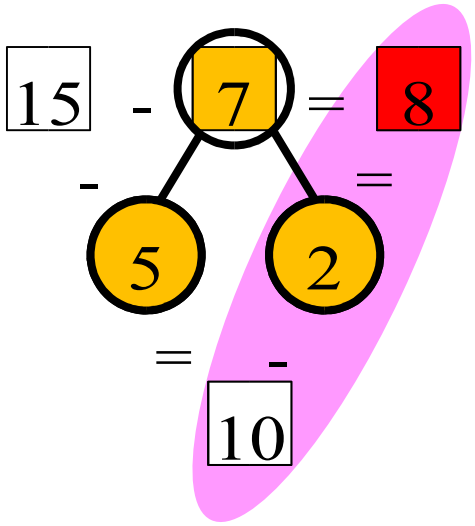
Year 2 - Block 1 | 8 + 7 = 15 • 15 - 7 = 8

Add single digit numbers bridging ten/ subtract single digit numbers from 11-18 bridging ten









numeric representations

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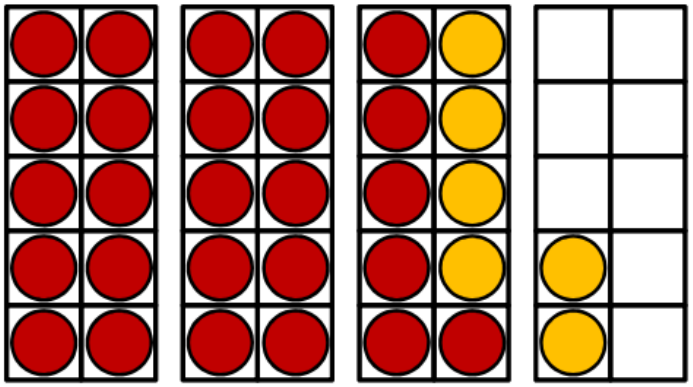
Year 2 - Block 2 | 26 + 6 = 32

Add a two-digit number and ones

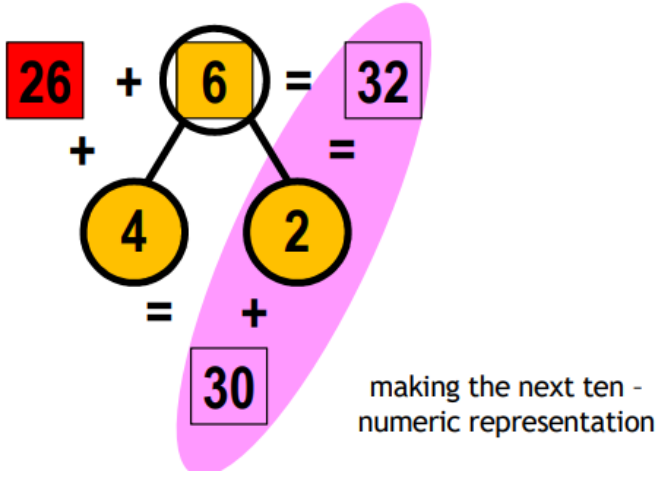
Add a two-digit number and ones

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

making the next ten -
100 square representation



making the next ten -
tens frame representation



making the next ten -
numeric representation

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Year 2 - Block 2 | 26 + 6 = 32

Add a two-digit number and ones

	T	O
	2	6
+		6
	1	2
	2	0
	3	2

expanded column method

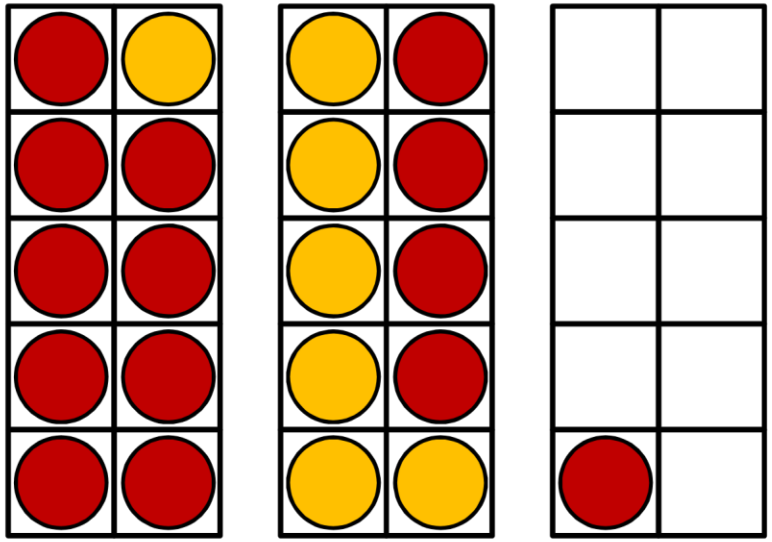
	T	O
	2	6
+		6
	3	2
	1	

compact column method

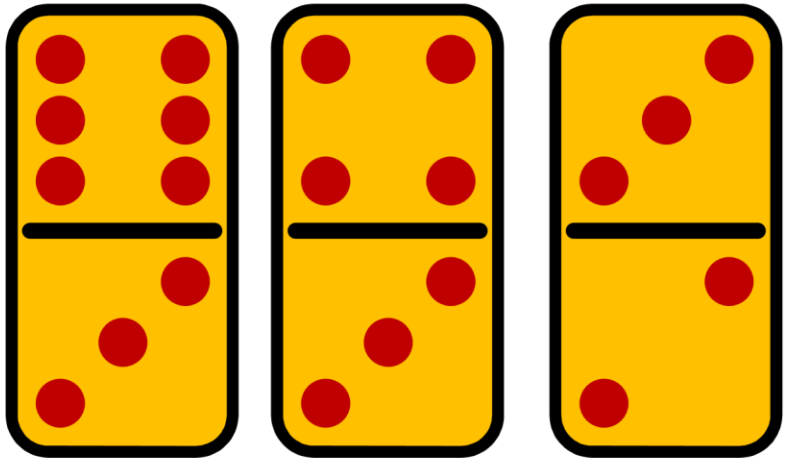
Year 2 - Block 2

9 + 7 + 5 = 21

Add 3 one-digit numbers



tens frames



dominoes

Cuisenaire® rods

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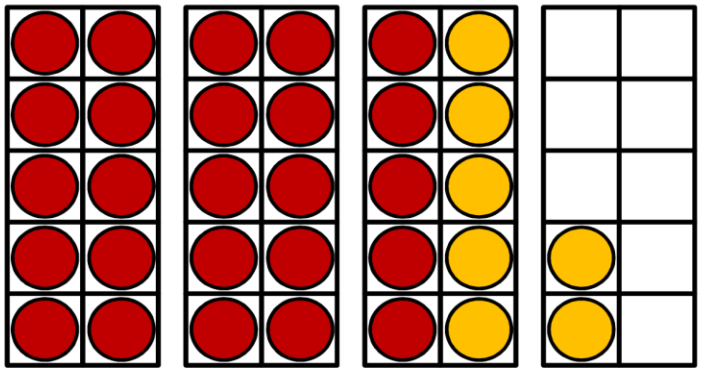
Year 2 - Block 2

32 - 7 = 25

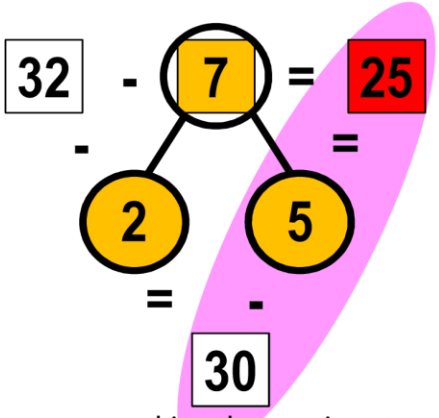
Subtract ones from a two-digit number

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					
		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

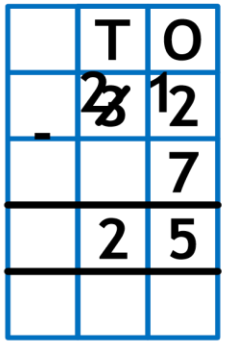
making the previous ten -
100 square representation



making the previous ten -
tens frame representation



making the previous ten -
numeric representation



compact column method

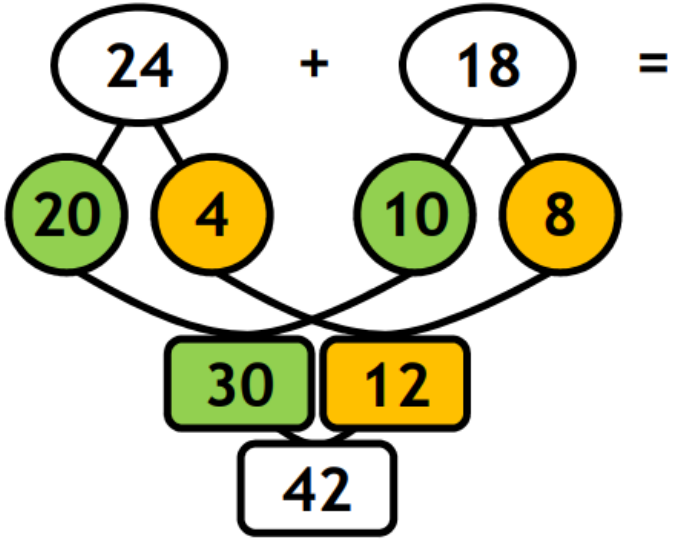
Year 2 - Block 2

24 + 18 = 42

Adding 2 two-digit numbers

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

partitioning the second addend-
100 square representation



partitioning both addends:
combine the tens; combine the ones; combine the results

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Year 2 - Block 2

24 + 18 = 42

Adding 2 two-digit numbers

	T	O
	2	4
+	1	8
	1	2
	3	0
	4	2

expanded column method

	T	O
	2	4
+	1	8
	4	2
	1	

compact column method

Add the ones.
4 ones + 8 ones = 12 ones
12 ones = 1 ten and 2 ones

Add the tens.
2 tens + 1 ten + 1 ten = 4 tens

Year 2 - Block 2

30 - 19 = 11

Subtracting a two-digit number from a multiple of ten

1	2	3	4	5	6	7	8	9	10
11									
21	22	23	24	25	26	27	28	29	
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

30 - 19 is the same as
30 - 10 - 9.

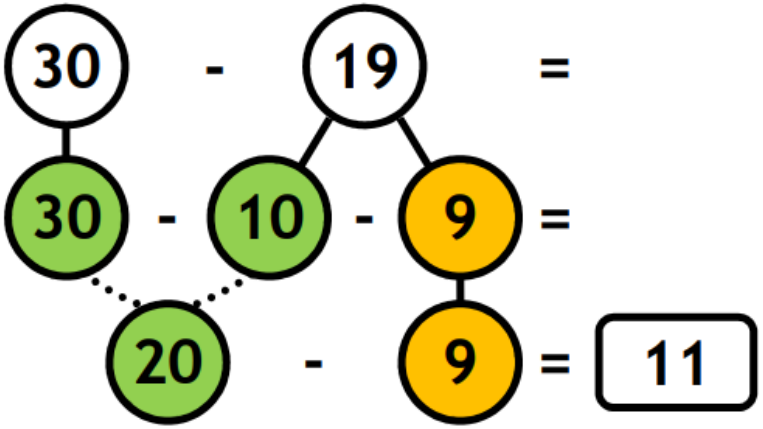
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

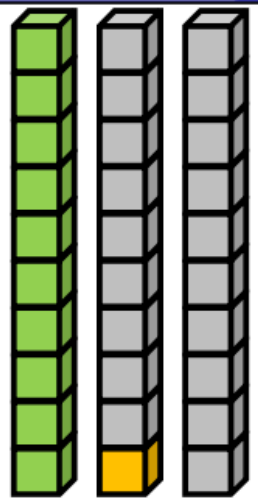
30 - 19 is the same as
30 - 9 - 10.

Year 2 - Block 2

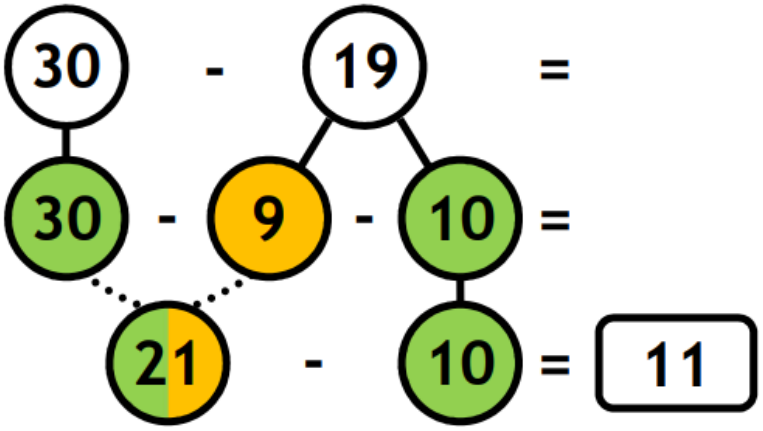
30 - 19 = 11

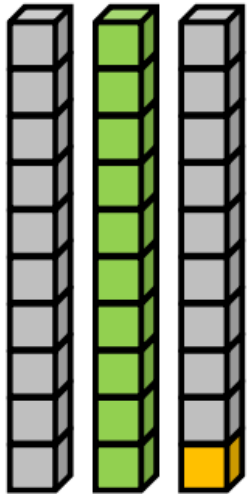
Subtracting a two-digit number from a multiple of ten





partitioning the subtrahend





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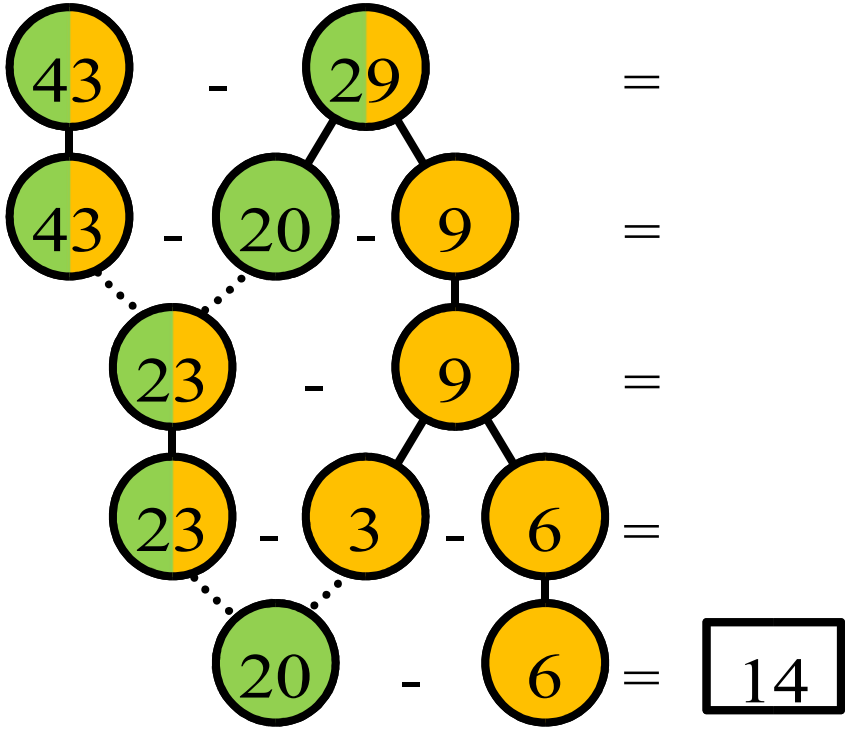
Year 2 - Block 2 | 43 - 29 = 14

Subtracting a two-digit number from a two-digit number



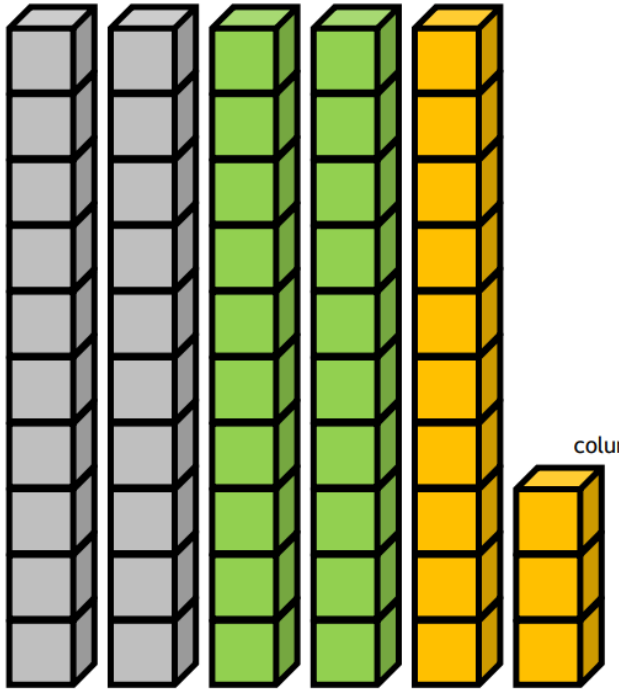
partitioning the subtrahend

Following Jesus, The Good Shepherd, in all we say and do

Year 2 - Block 2

43 - 29 = 14

Subtracting a two-digit number from a two-digit number



	T	O
	3 ~~4~~	1 3
-	2	9
	1	4

column method supported by base ten

Subtract 9 ones.

There are not enough ones.

Let's exchange 1 ten for 10 ones.

Subtract 9 ones.

Subtract 2 tens.