the National Parent Forum of Scotland

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Learning Together

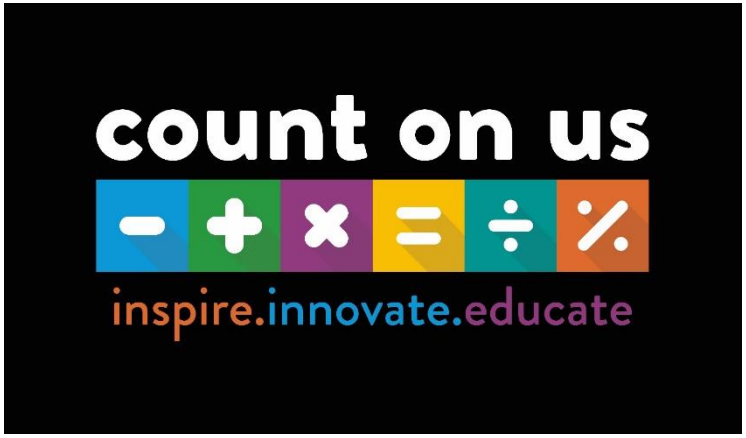
Online Numeracy and Mathematics sessions for parents to support Learning at Home

With support from Education Scotland and Scottish Government, building on themes emerging from the 'Making Maths Count' Group report

Scottish Government
Riaghaltas na h-Alba
gov.scot

Education Scotland
Foghlam Alba

MAKING MATHS COUNT



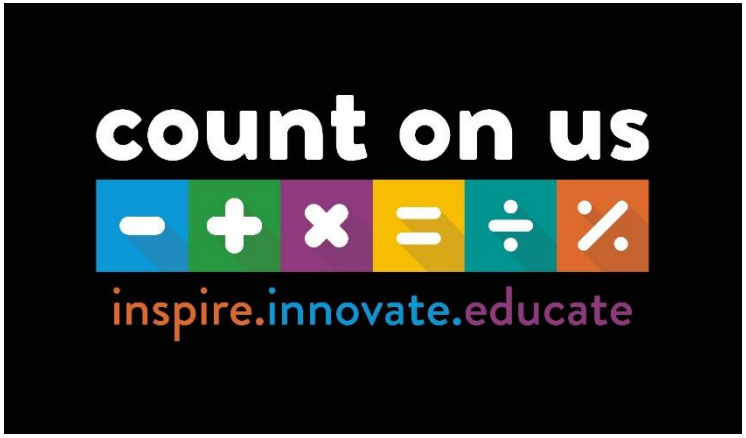
Learning Together Session 2

Tuesday 9th June 10:00

Addition and Subtraction

#npfsmaths

Twitter : @CountOnUsEd



#npfsmaths
@EducationScot
@parentforumscot
@CountOnUsEd

Tweet pictures of families working together

Learning Together Session 2
Addition and Subtraction

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- Subitising – recap (covered in session 1)
- Addition strategy 1 – place value partitioning
- Addition strategy 2 –make a TOTAL 10
- Subtraction strategy 1 – removal by parts
- Subtractions strategy 2 – counting on/up
- Deciding on the most efficient strategy

There are lots of other strategies but we shall focus on these today

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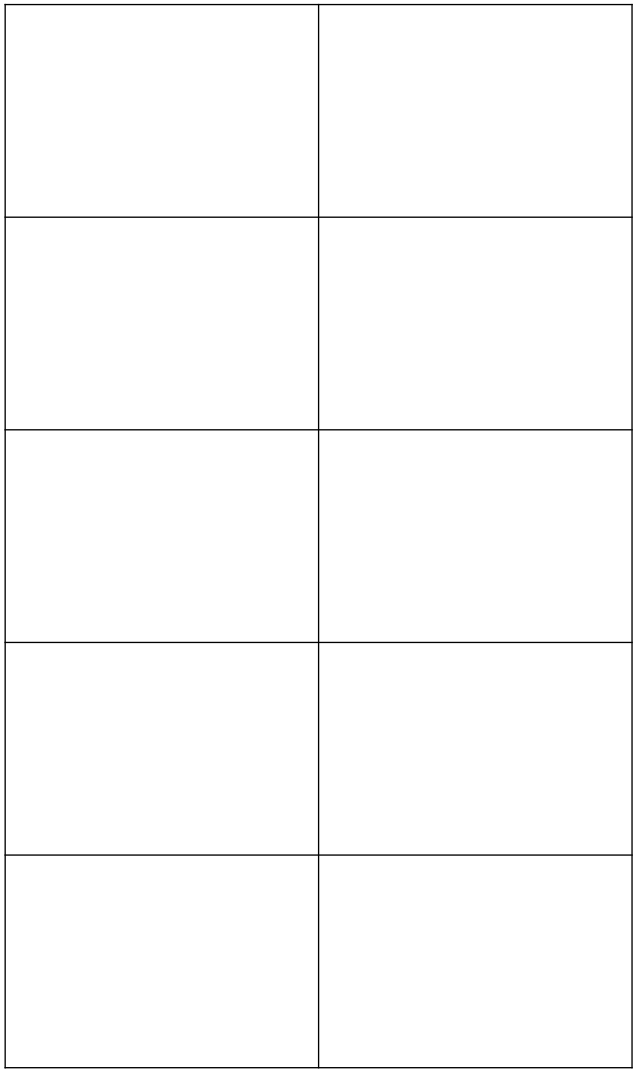
Subitizing
Recap from session 1

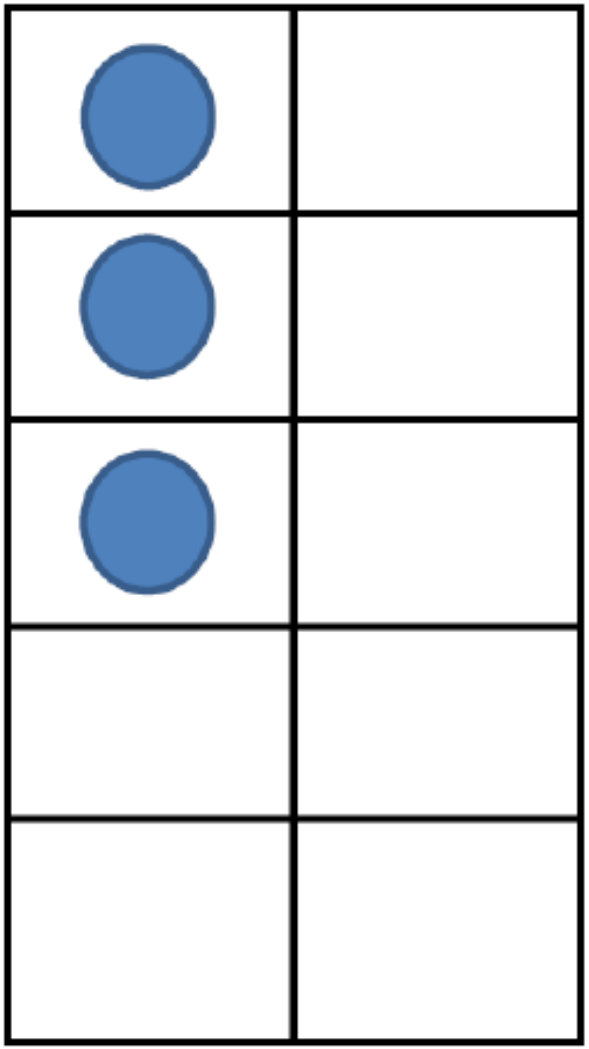


I like 10 frames.

I like making 10.

I like using tens as a reference point.

Subitize



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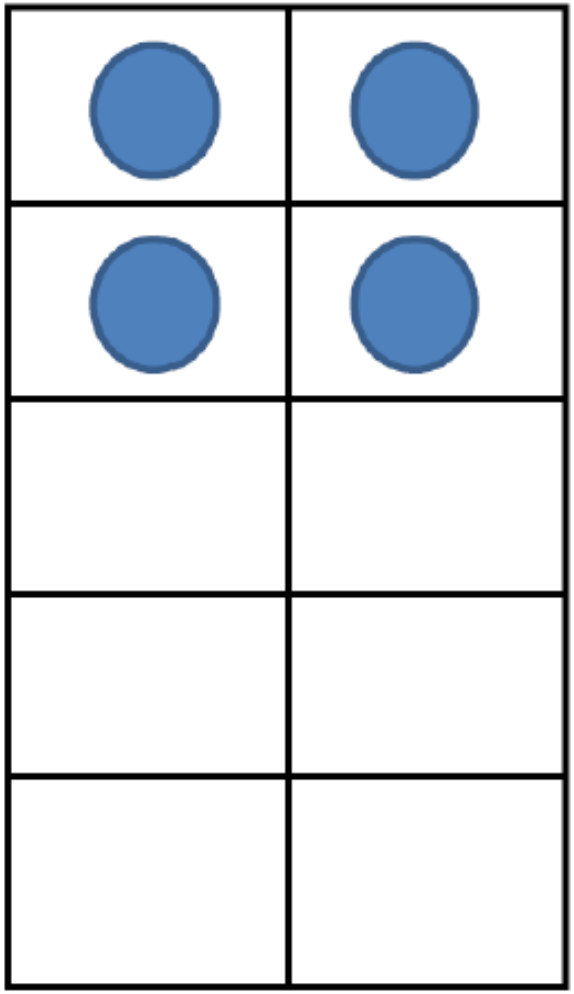
Subitize



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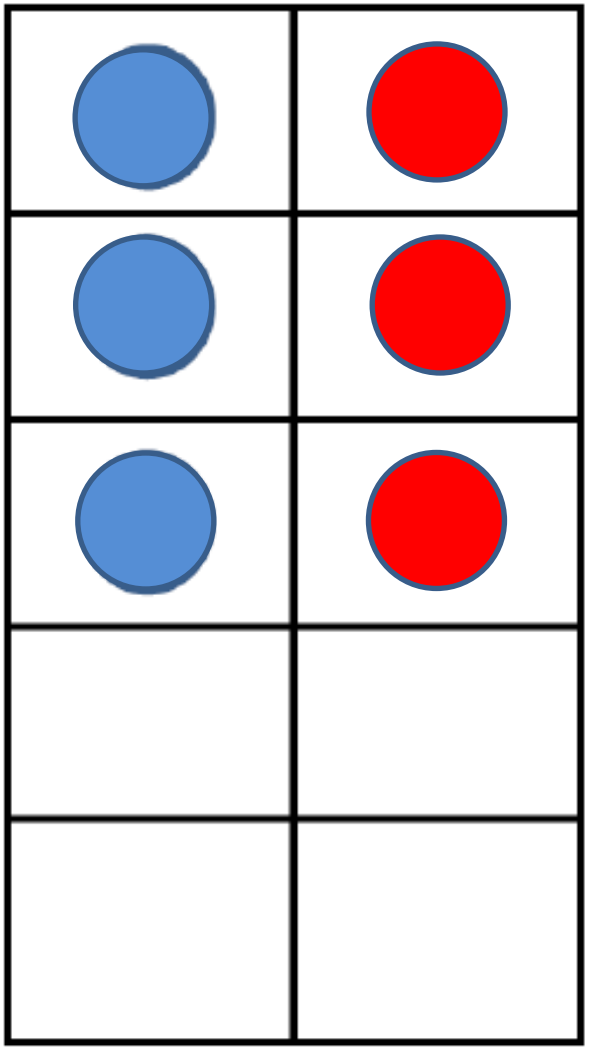
Subitize



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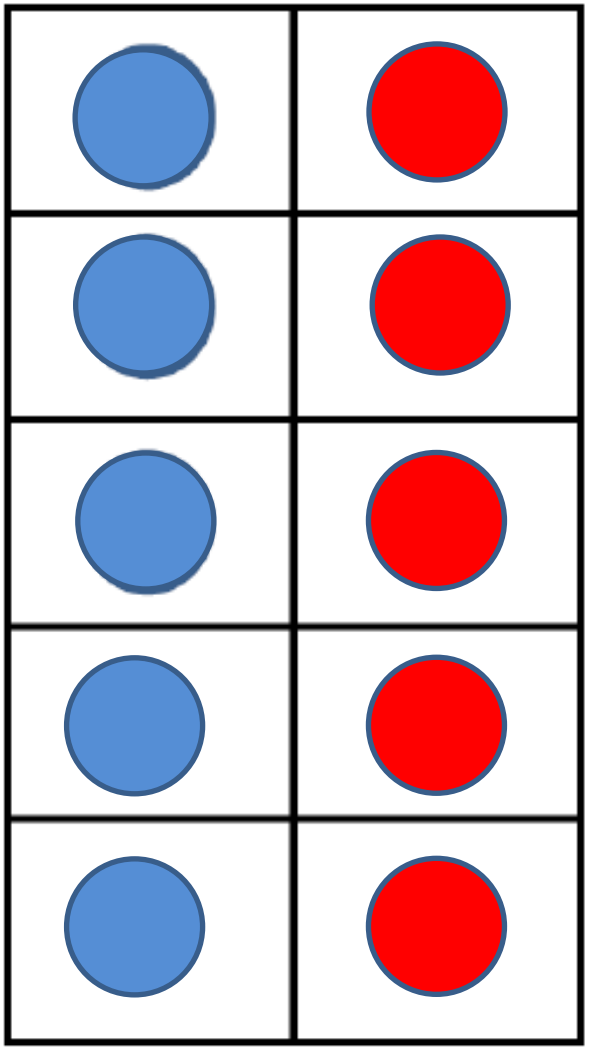
Subitize



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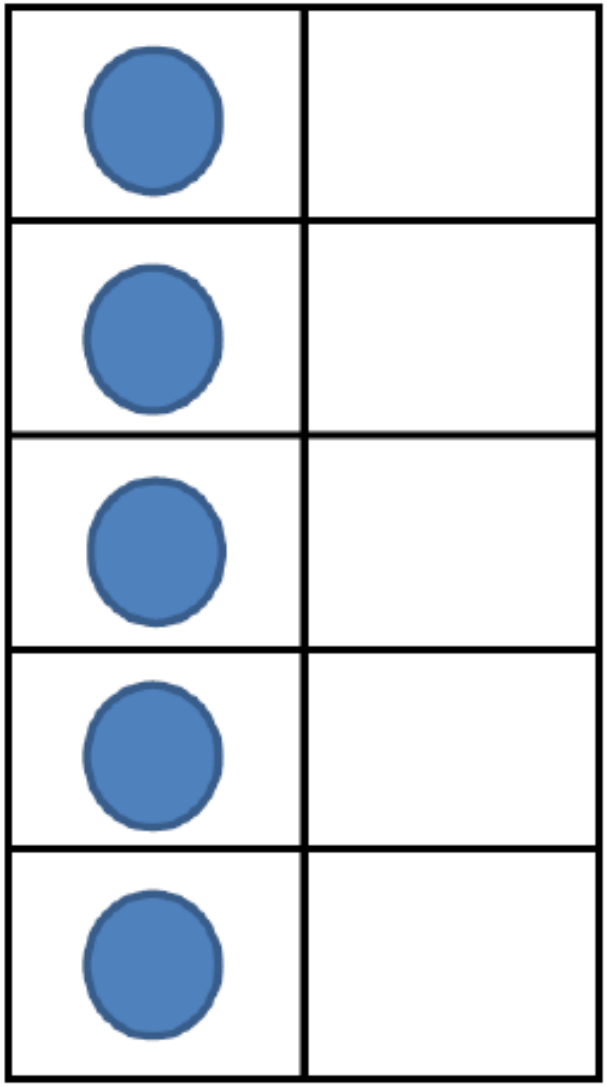
This is called a

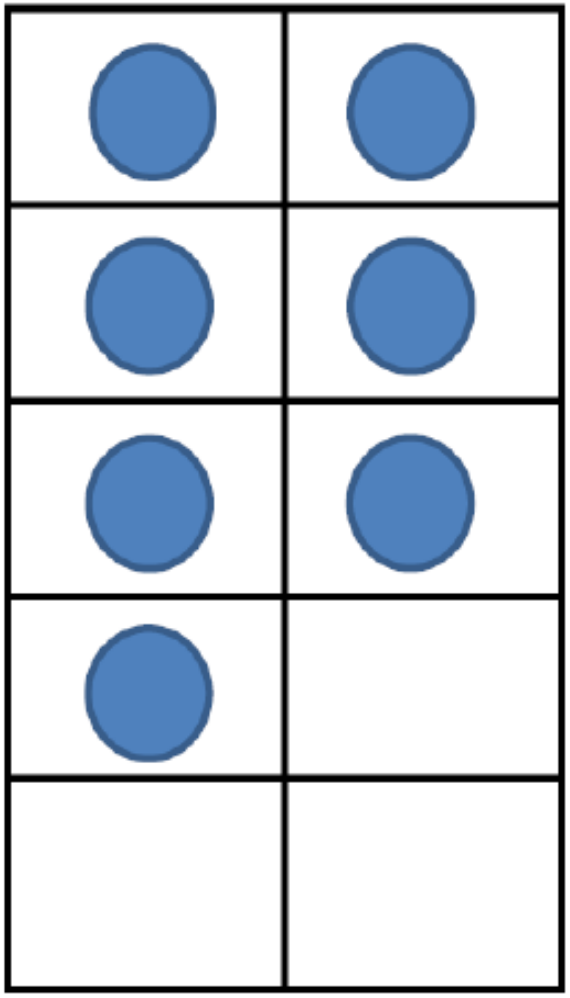
TOTAL 10



This is called a

FAST 5

Subitize

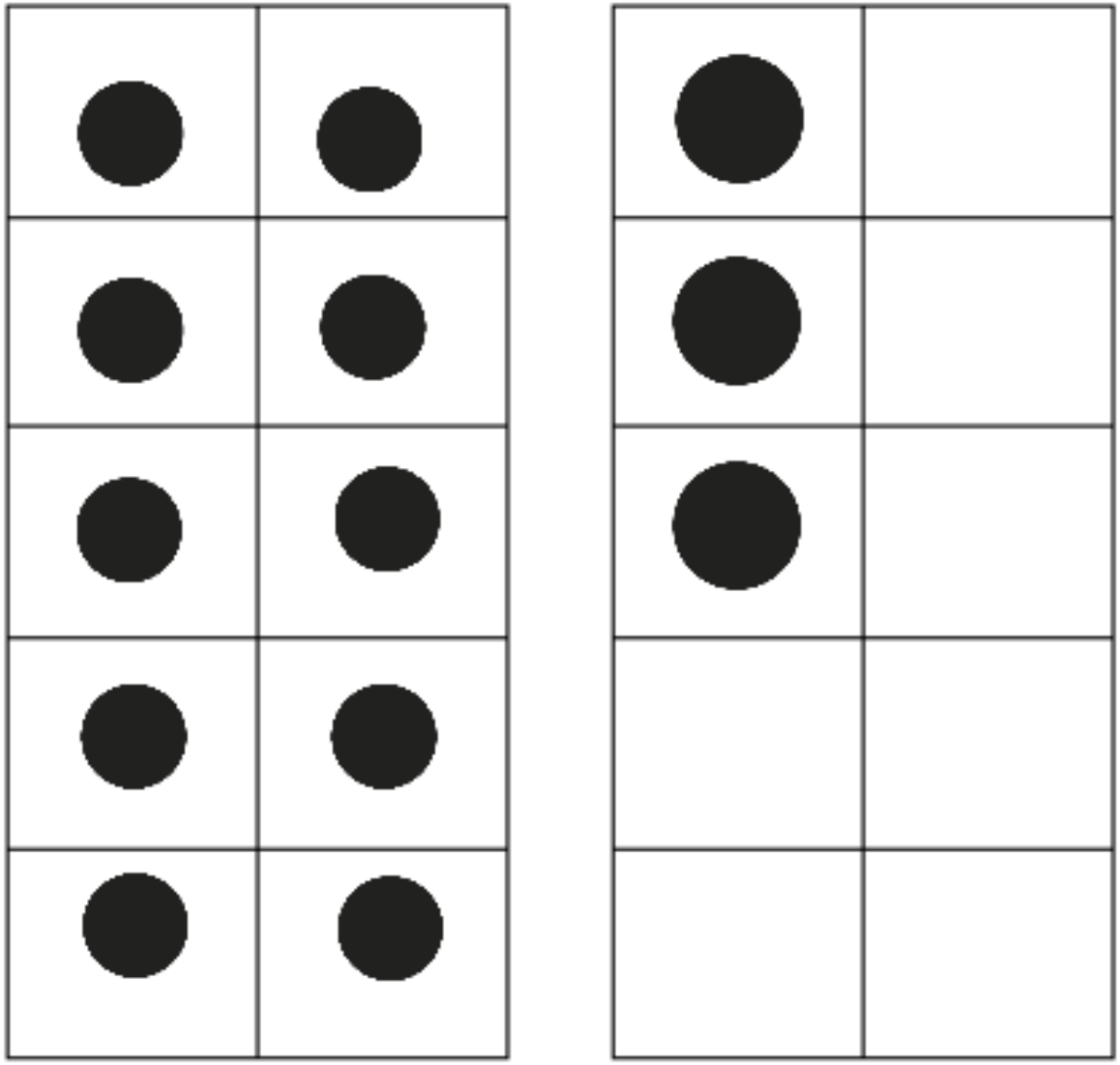


Effective questions which parents can ask such as:
How do you know it's 7 – do you see 4 + 3?

Can you make 7 in other ways?

- 1 less that 8,
- 3 less than 10…

Subitize



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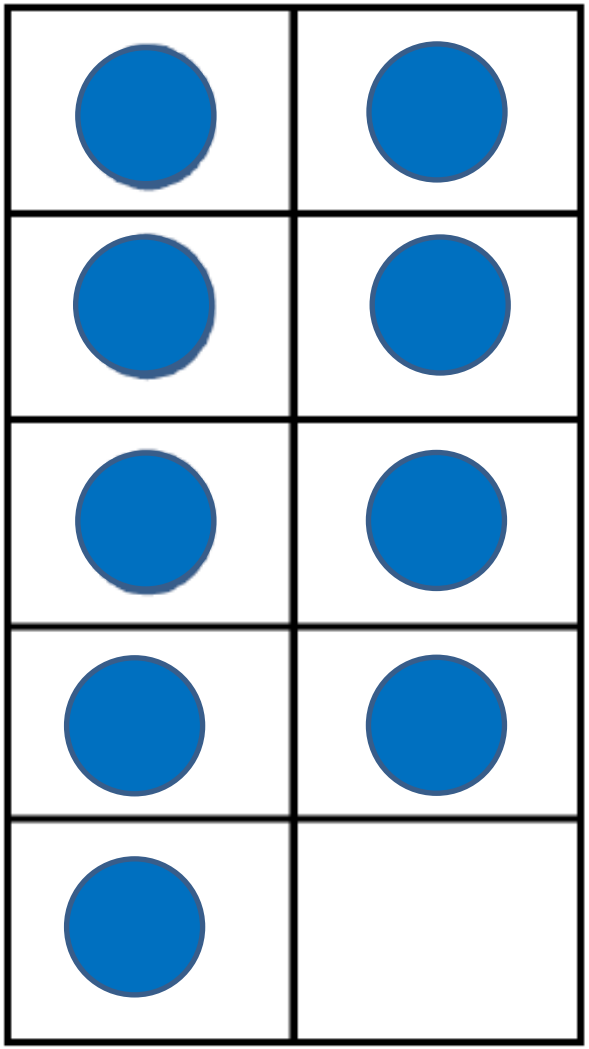
Tens	Ones
1	3

Subitising using 2 tens frames links to the understanding of place value

Subitize



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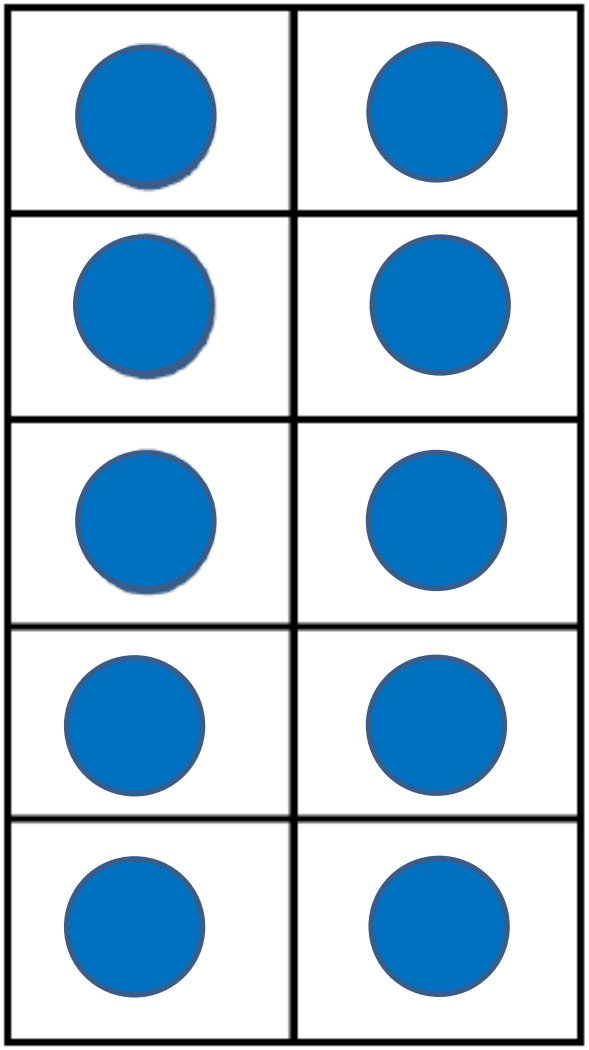
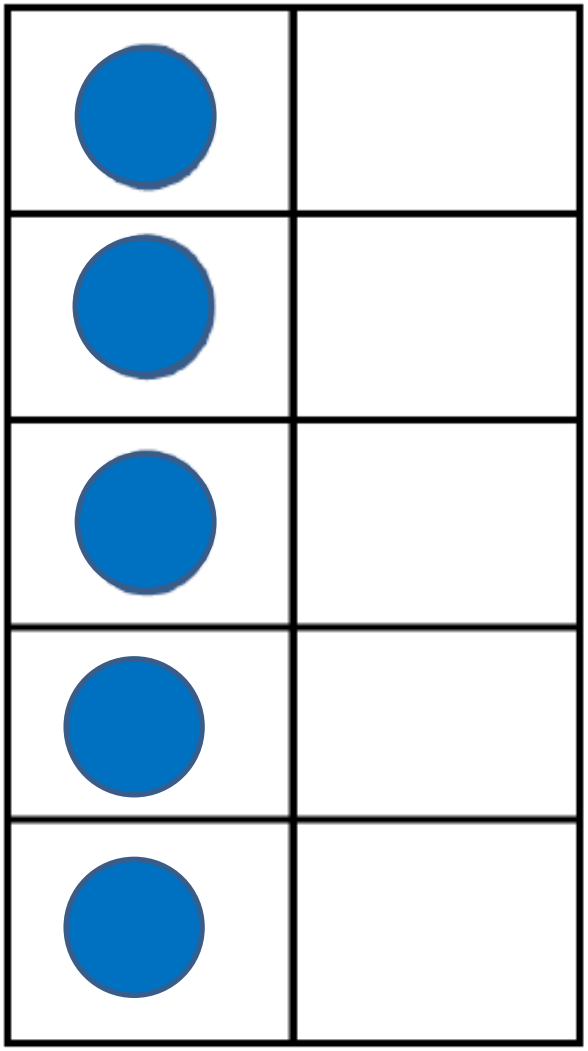
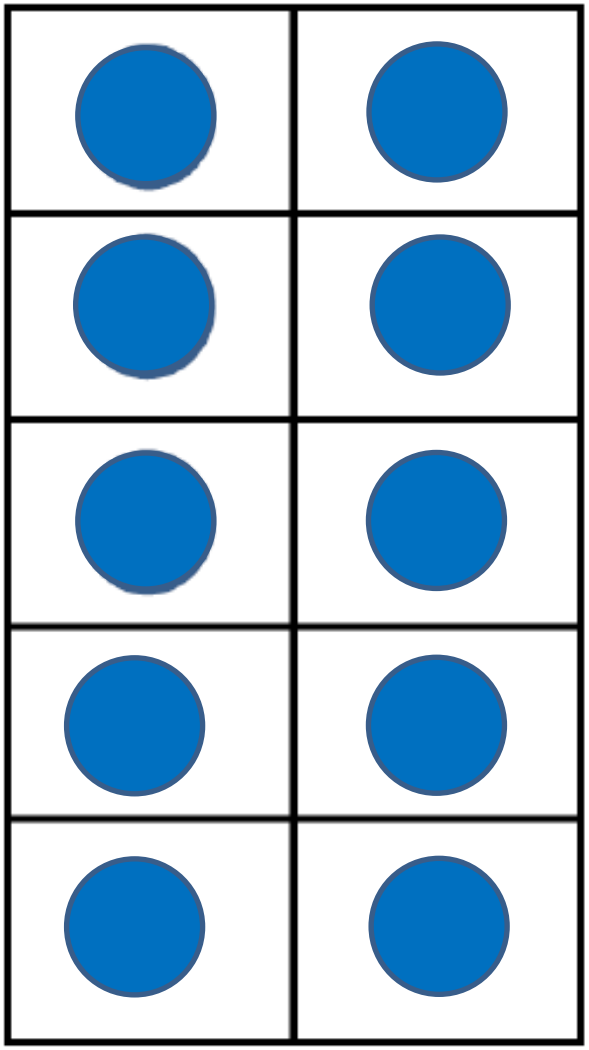
Subitize

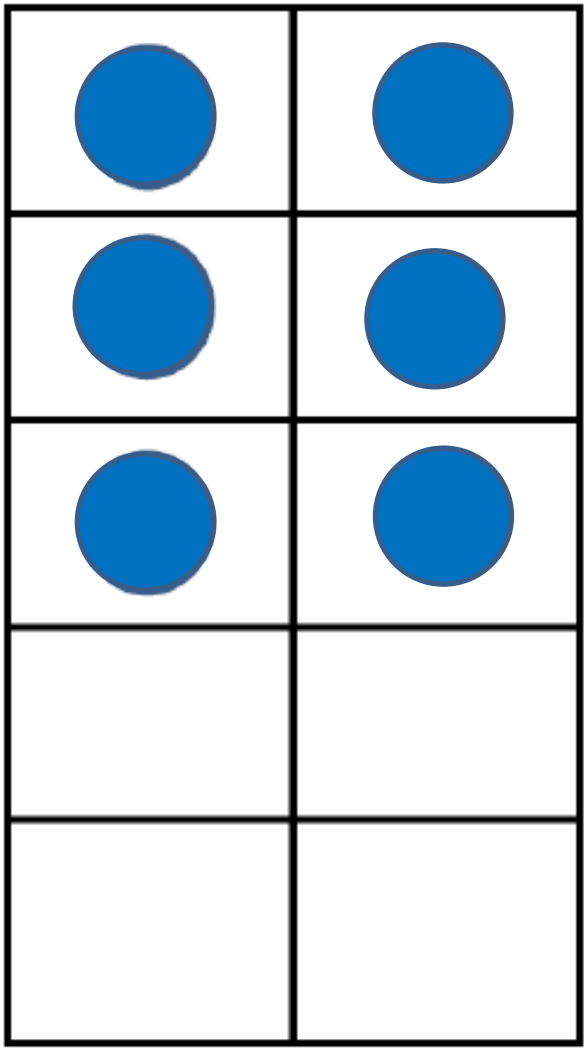




Tens	Ones
1	5

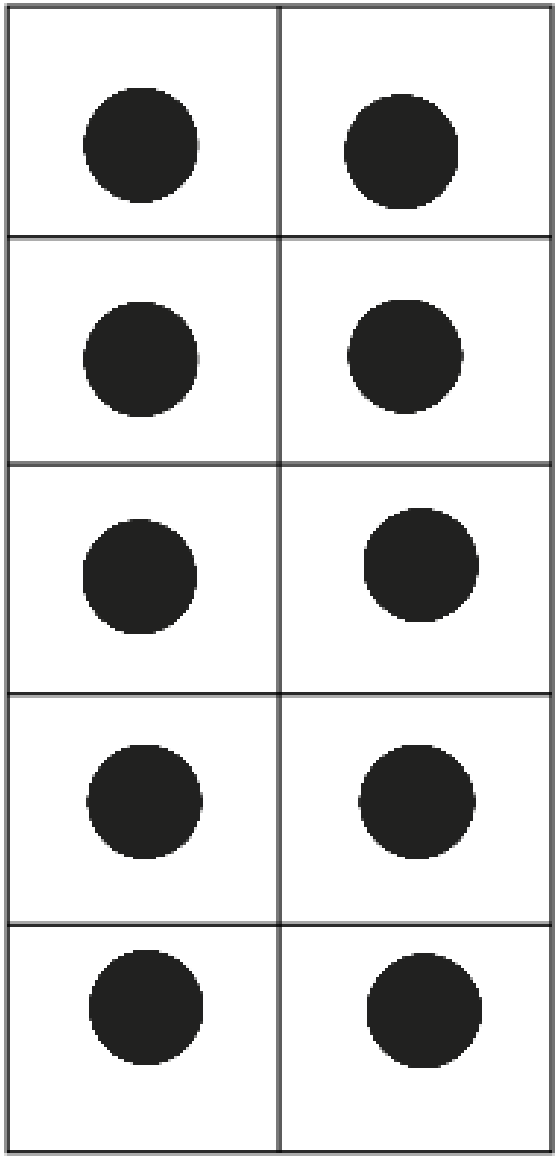
Subitize

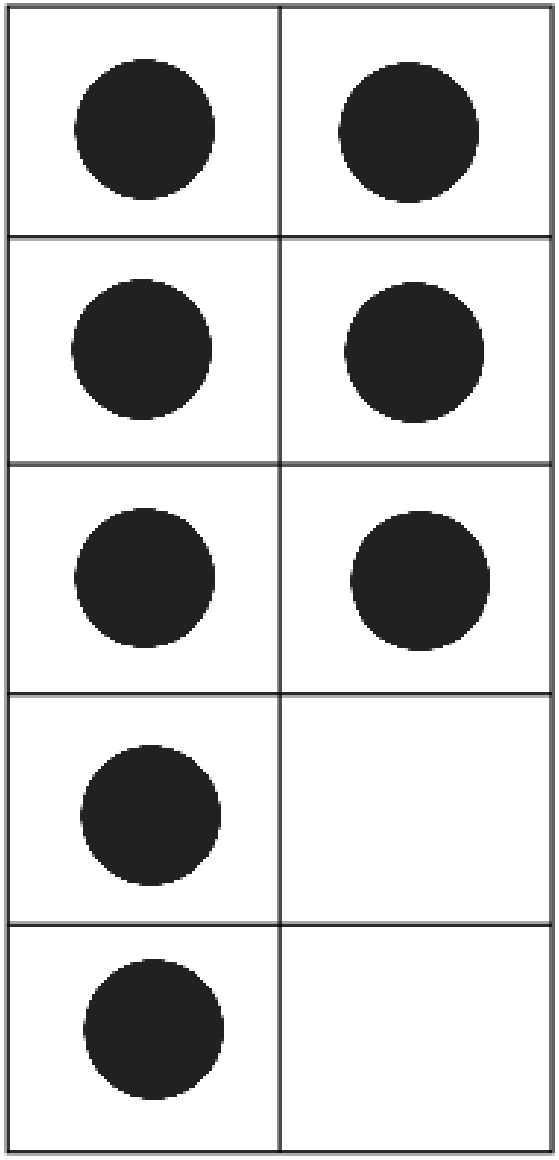




Tens	Ones
1	6

Subitize





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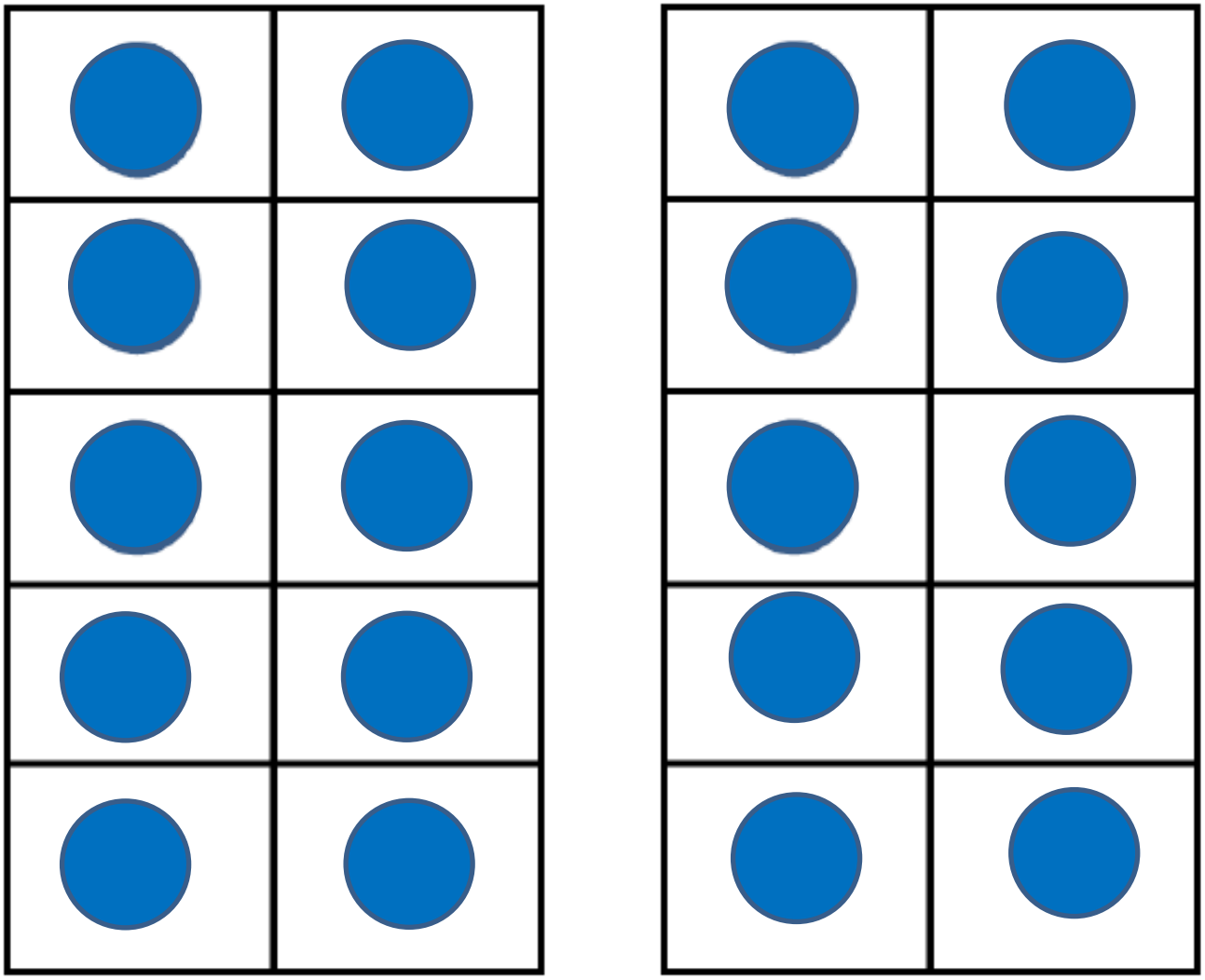
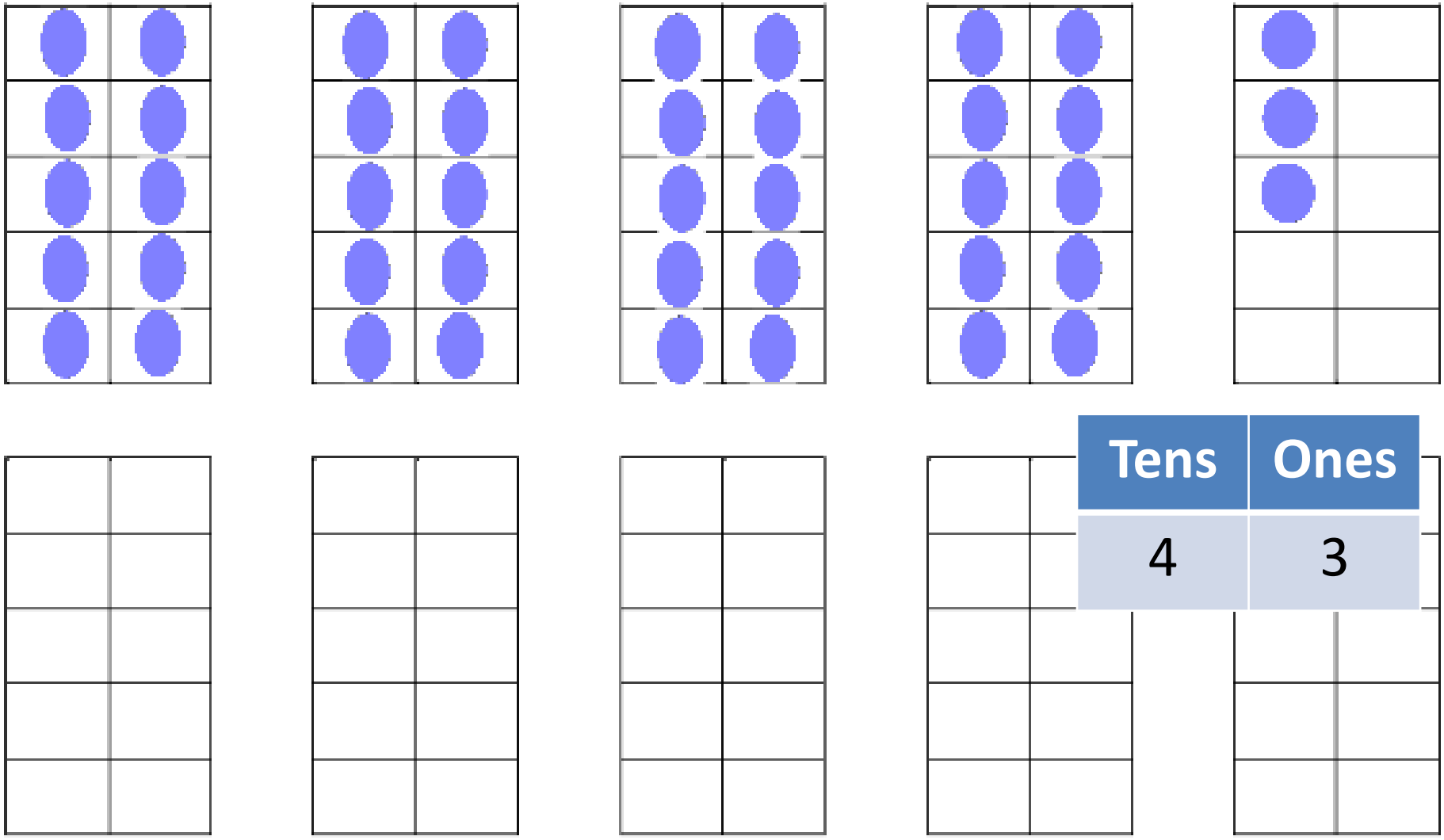
Tens	Ones
1	8

Subitize



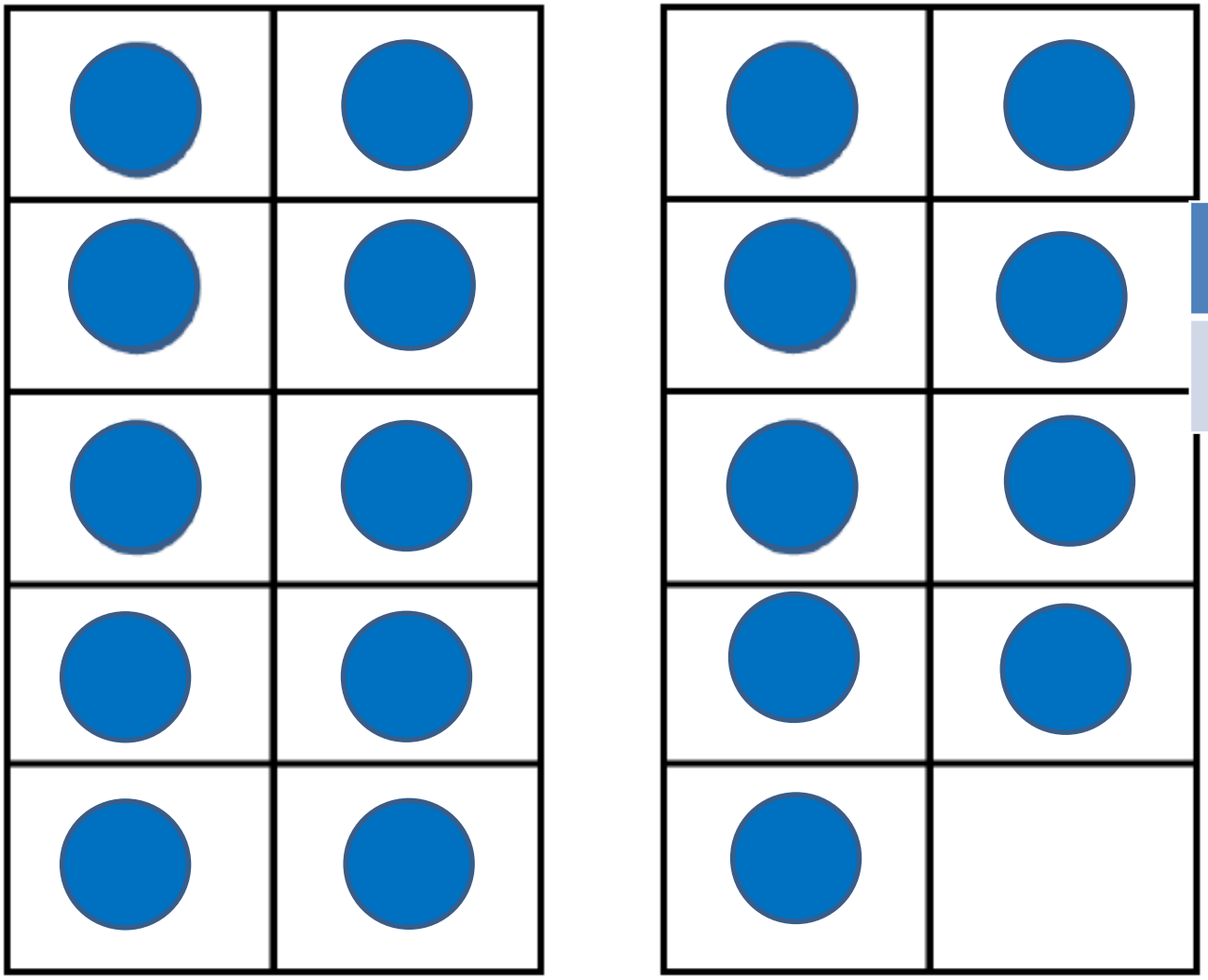
Tens	Ones
2	0

Subitize big numbers



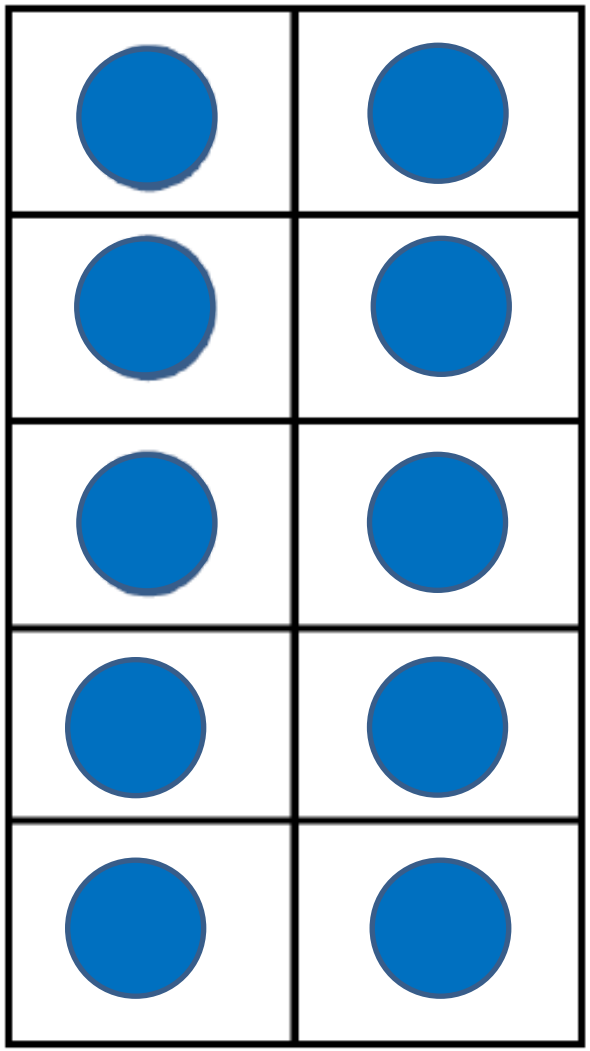
Tens	Ones
4	3

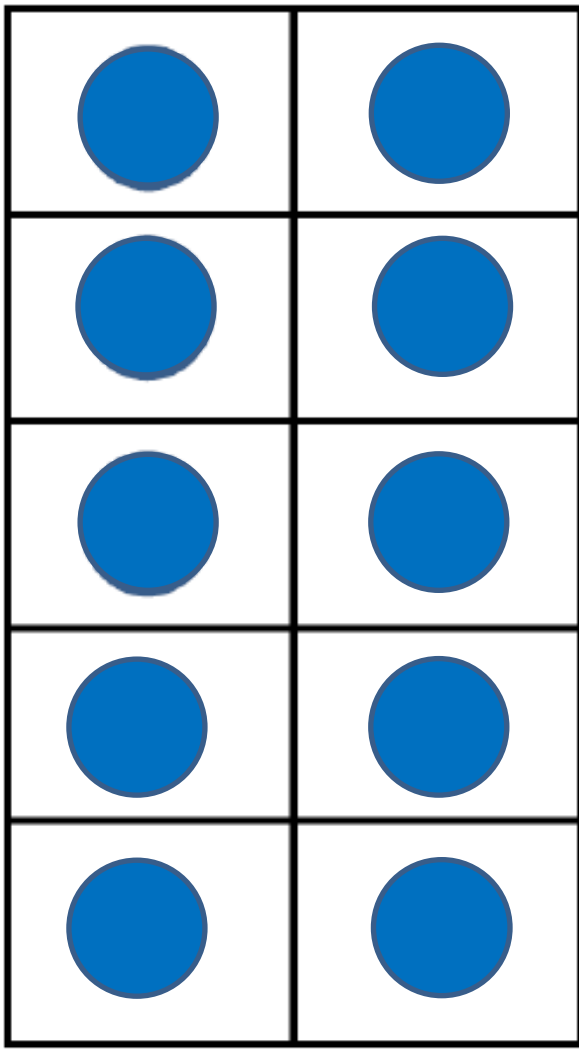
Subitize

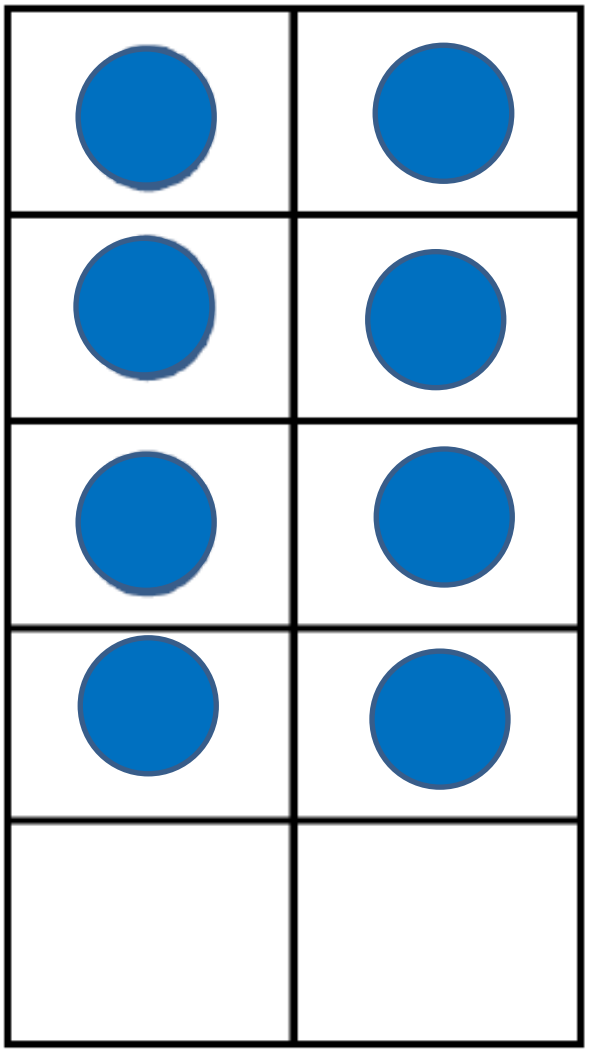


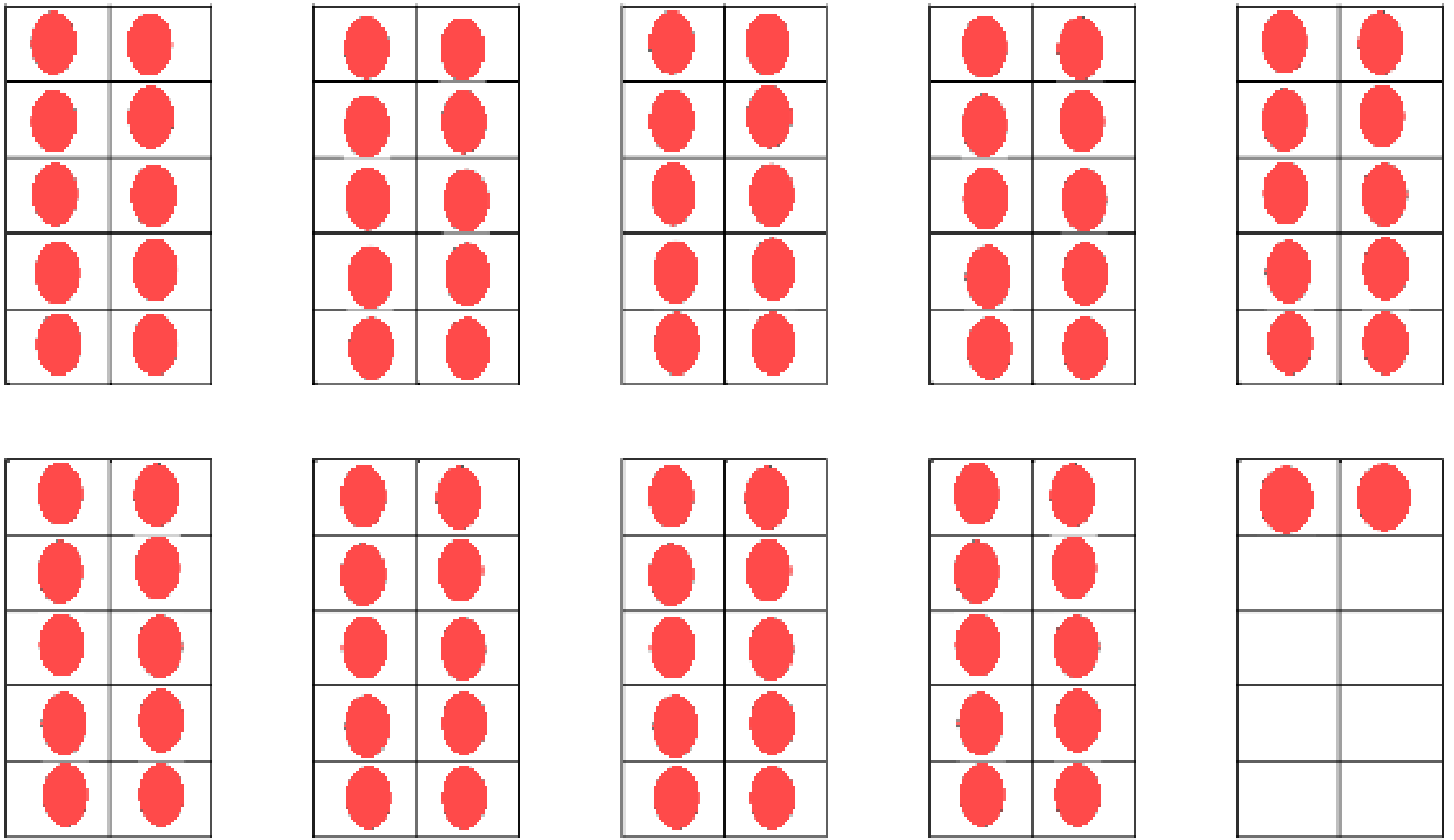
Tens	Ones
1	9

Tens	Ones
2	8









Tens	Ones
9	2

In the following examples you will see why ‘subitizing’ and partitioning are such vital skills.

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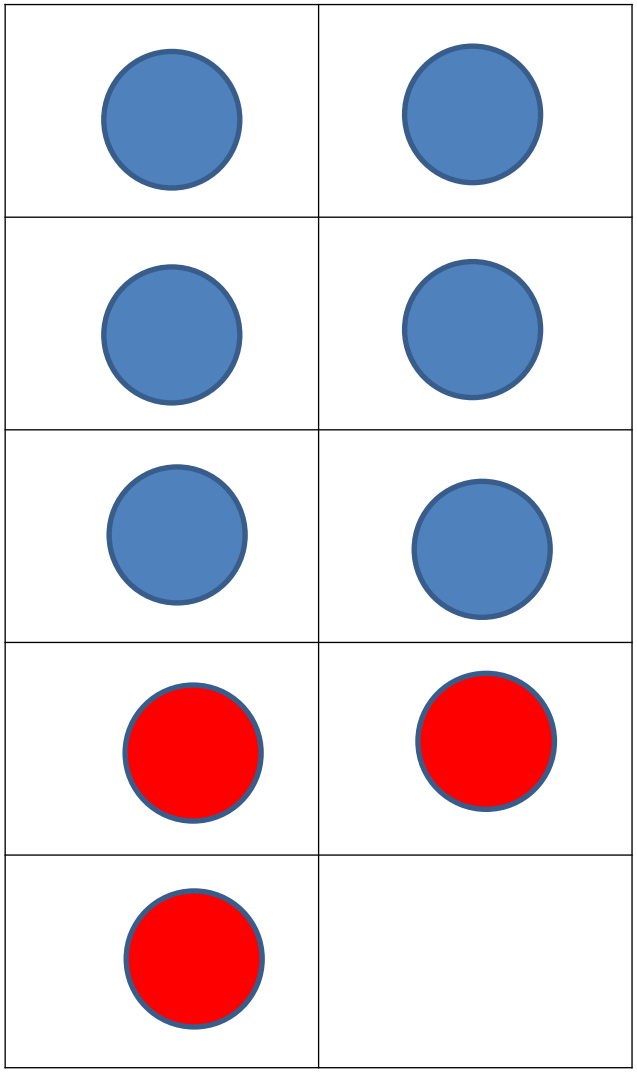
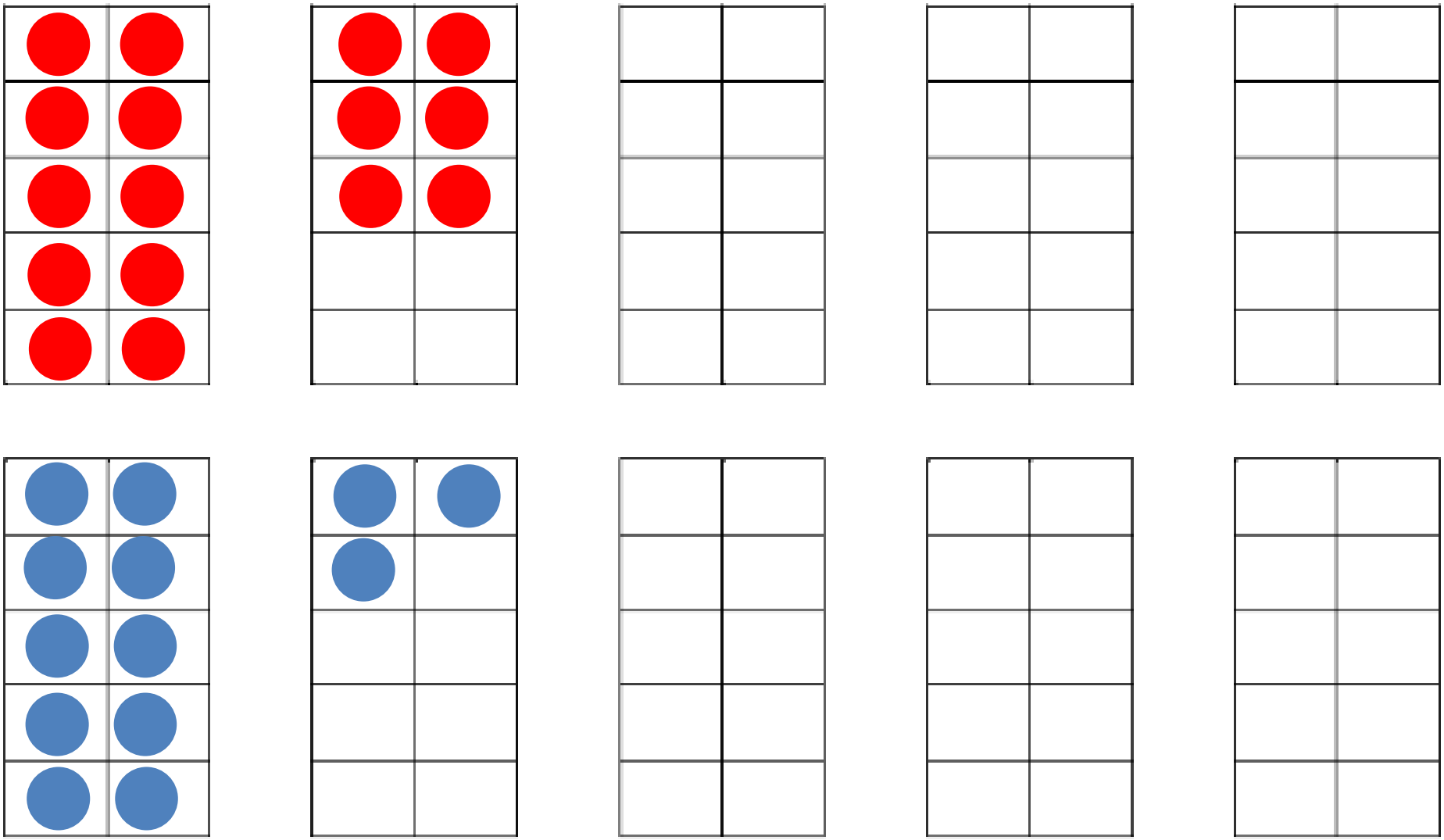
Addition Strategy 1
Place Value Partitioning



$6 + 3 = 9$

16 + 13



10 + 10 + 6 + 3 = 29

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$16 + 13 = 29$

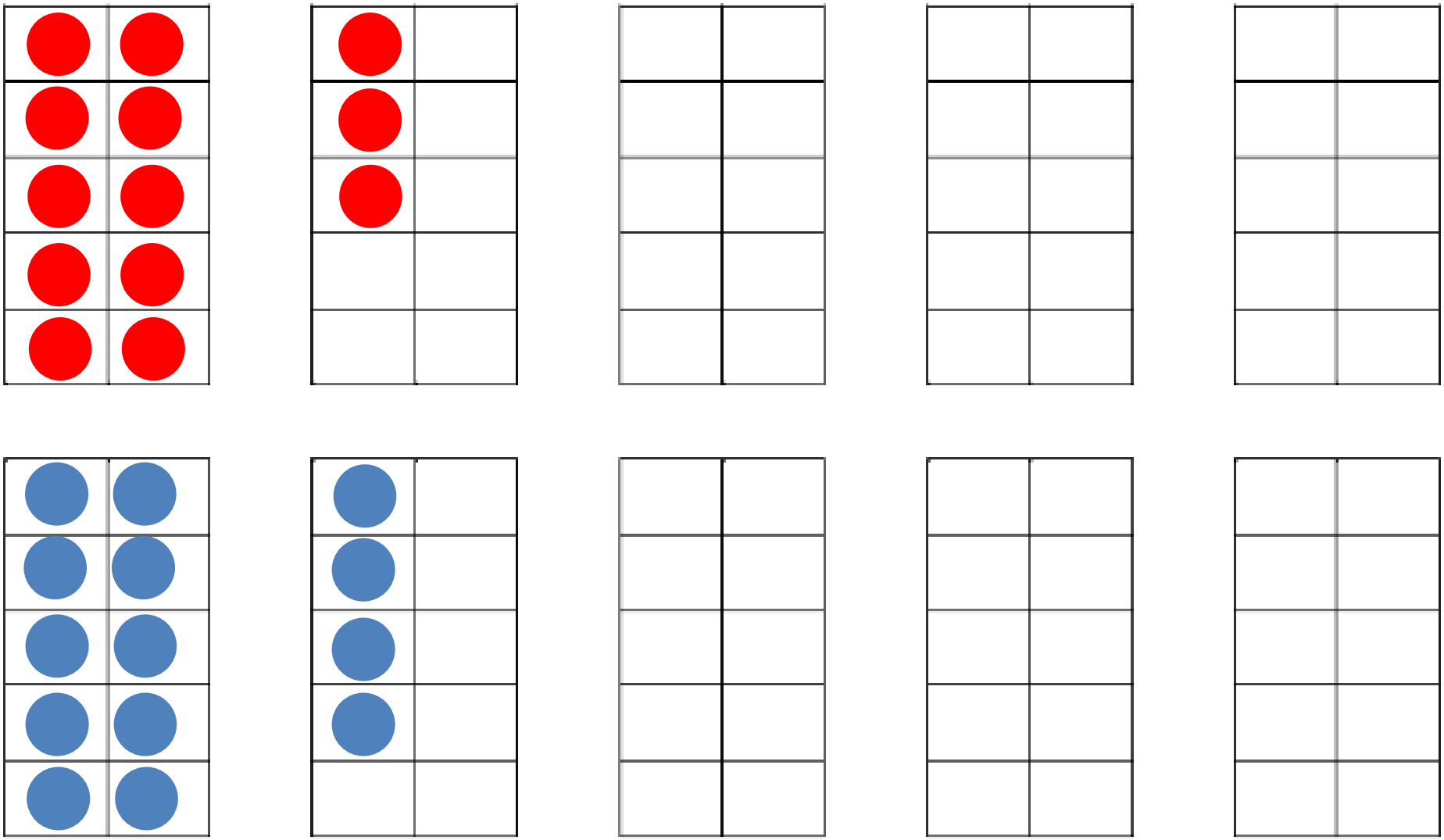
$13 + 16 = 29$

$29 - 16 = 13$

$29 - 13 = 16$

What connections and links can be made here

13 + 14



10 + 10 + 3 + 4 = 27

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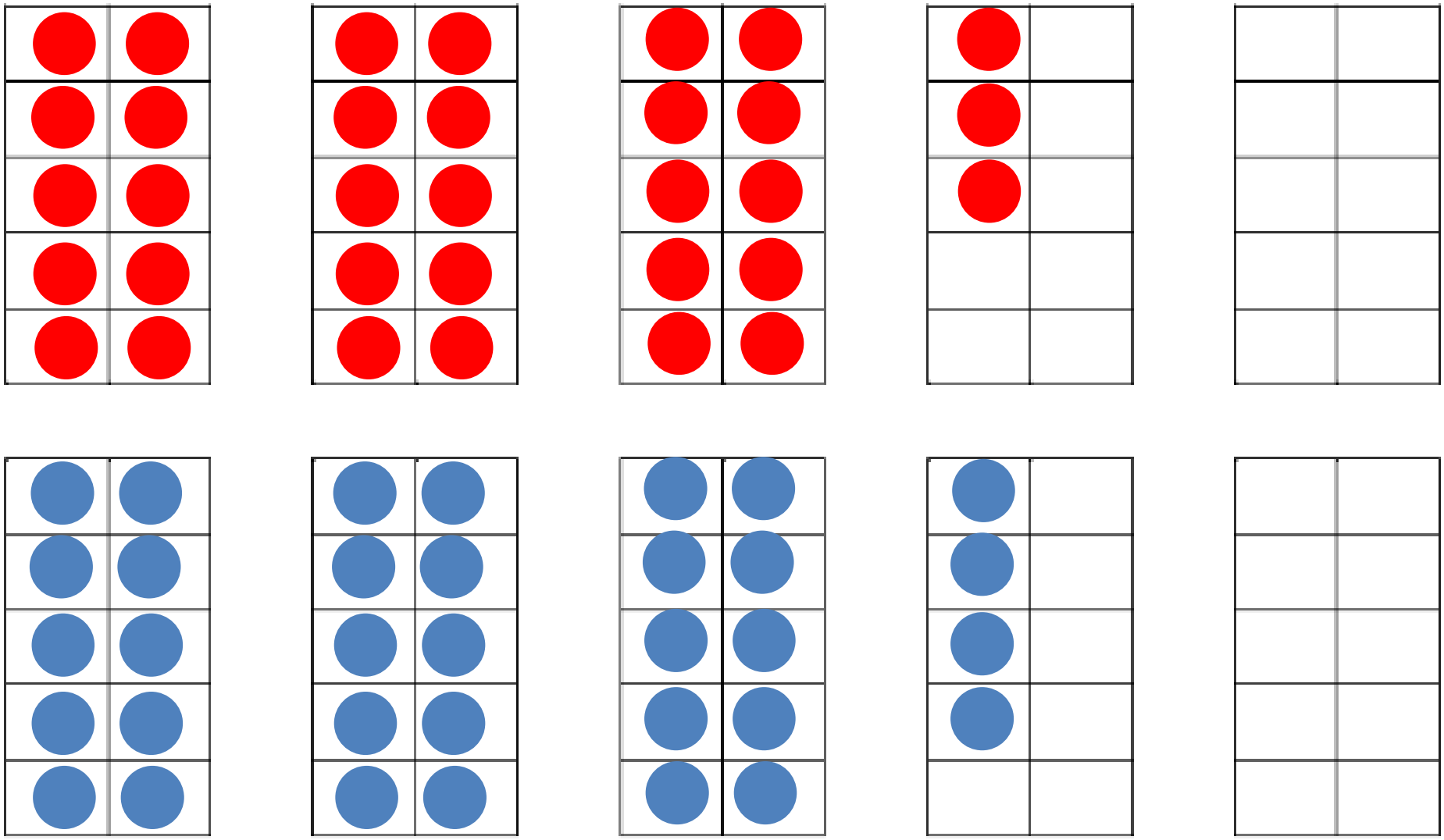
33 + 34



30 + 30 + 3 + 4 = 67

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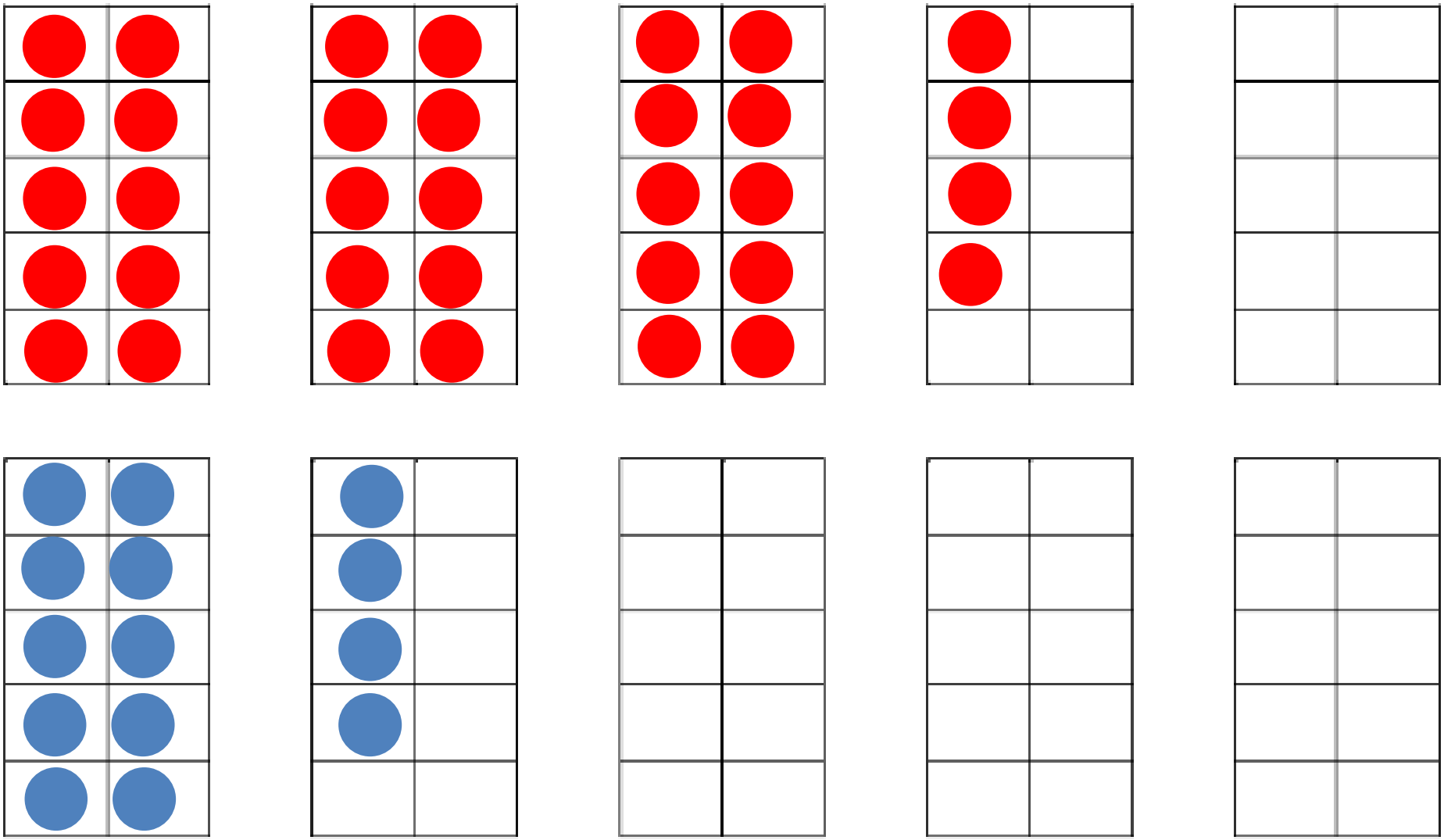
34 + 14



30 + 10 + 4 + 4 = 48

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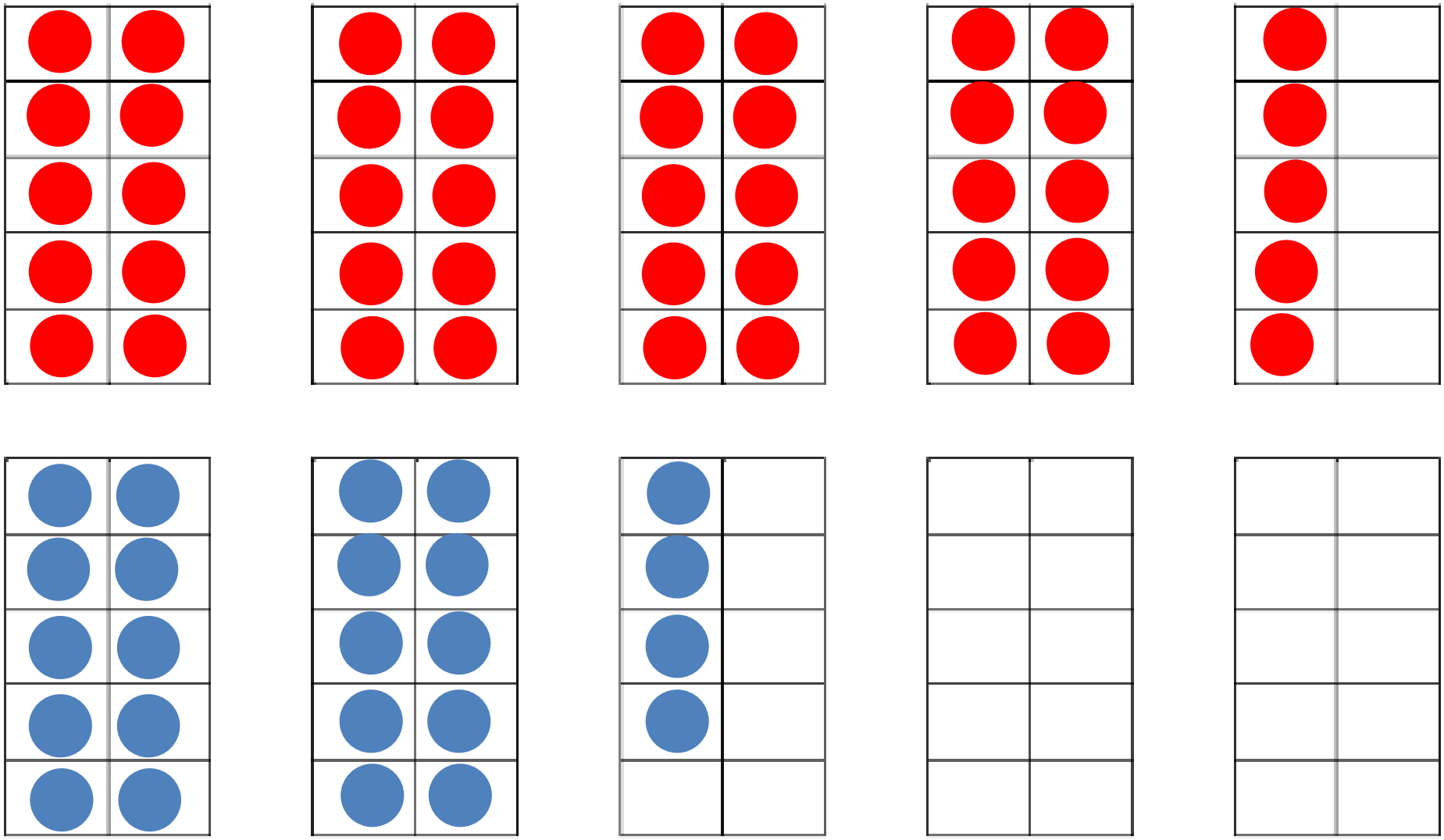
45 + 24



40 + 20 + 5 + 4 = 69

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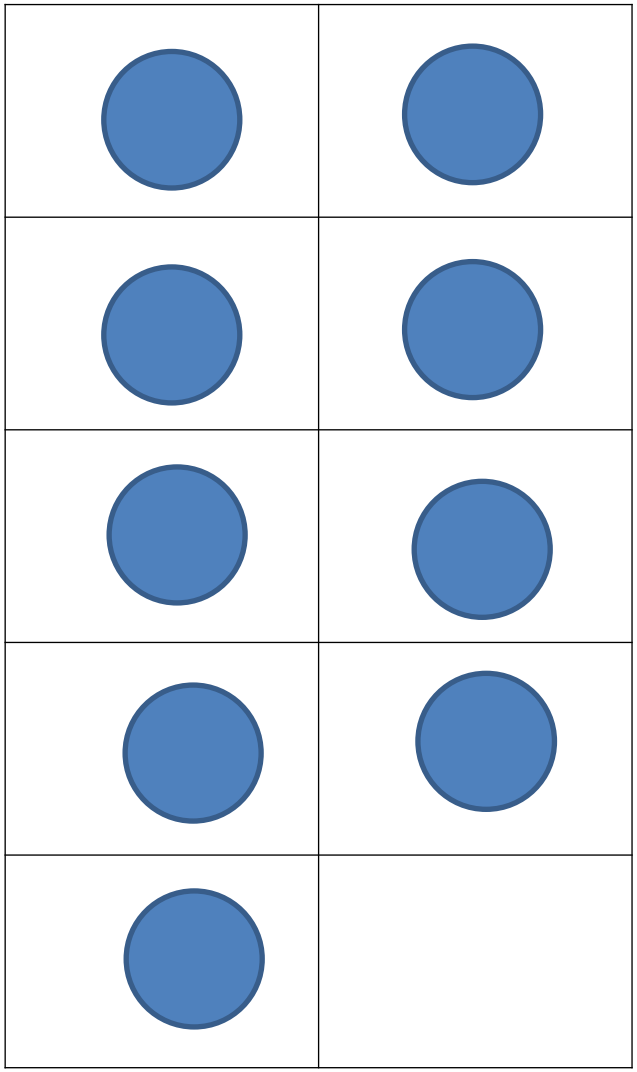
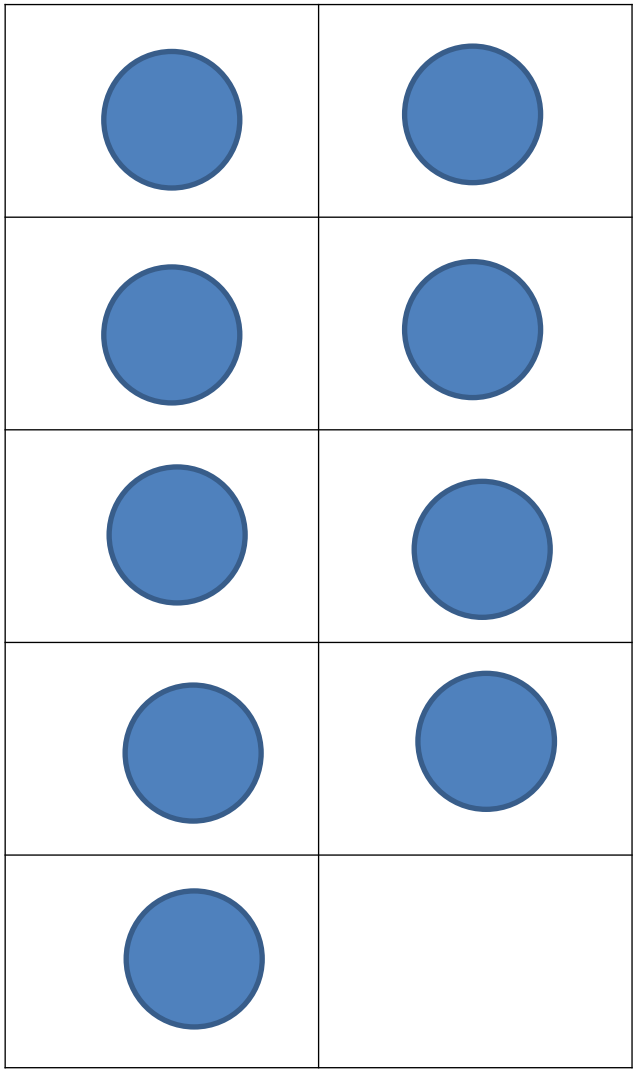
Addition Strategy 1
Make a TOTAL 10

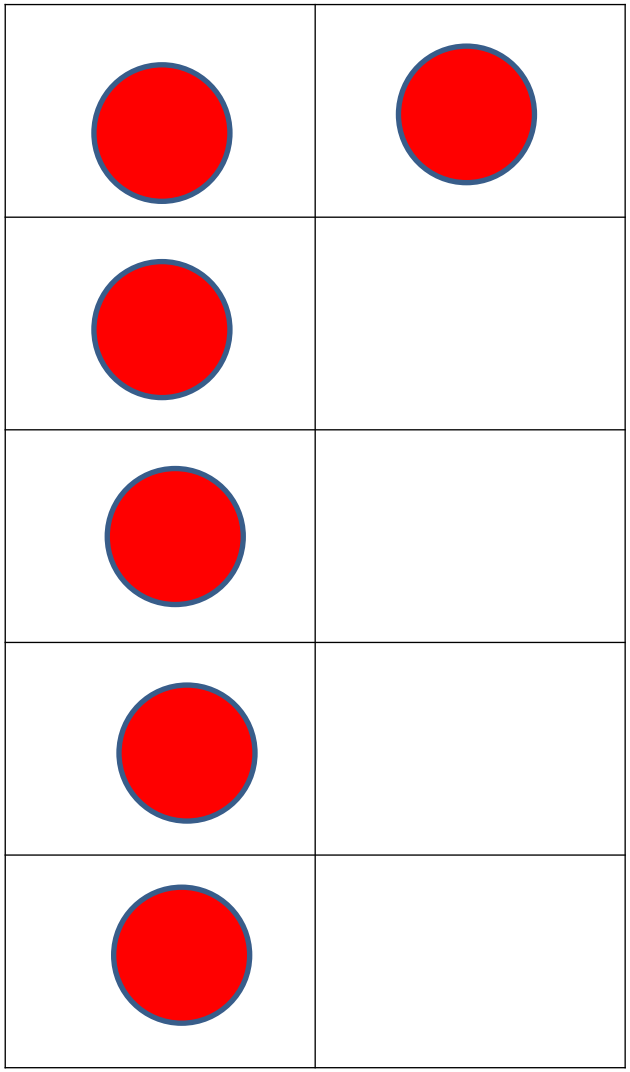
Bridging through 10

Draw 9 dots in the 1st 10 frame

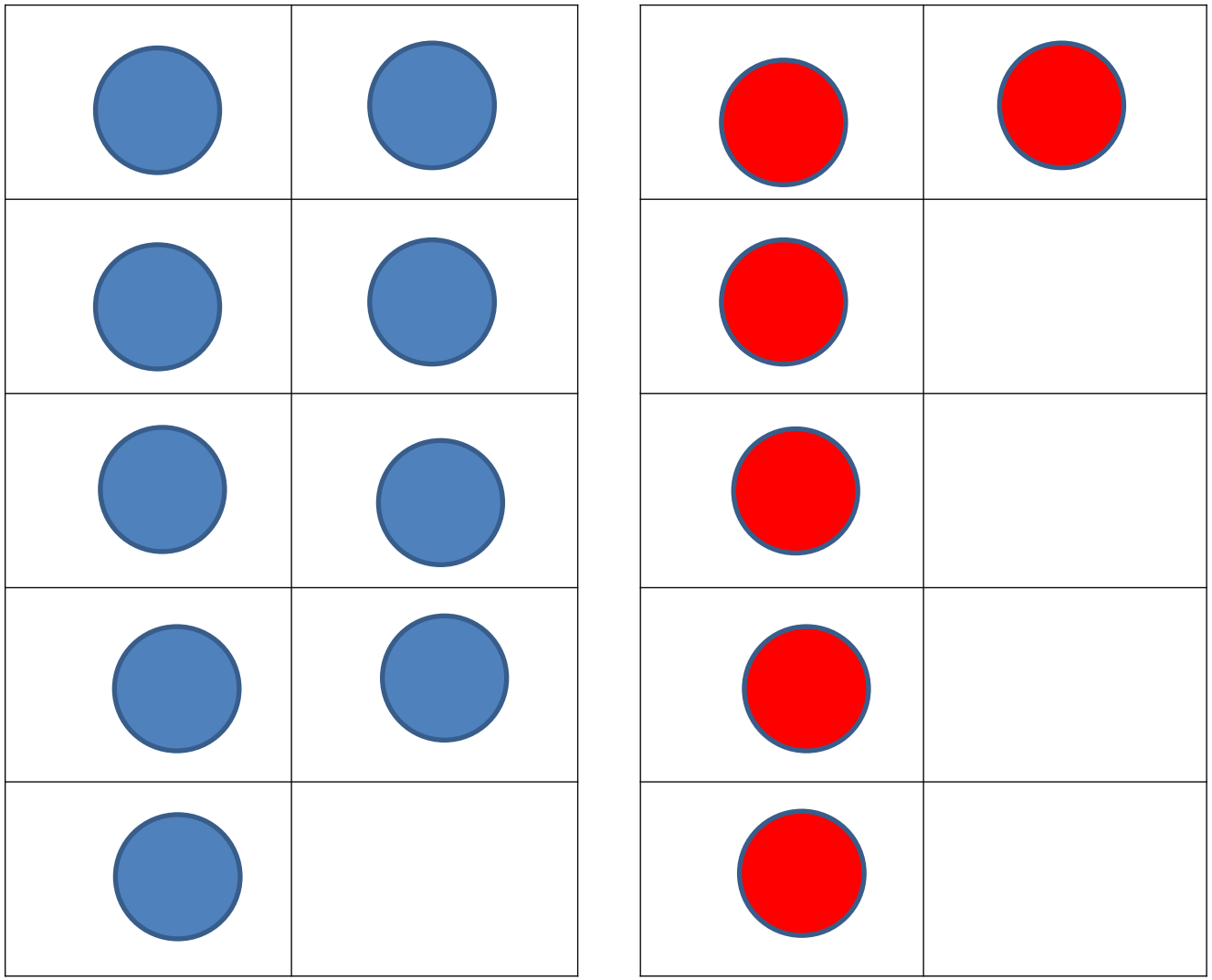


Draw 6 dots in the 2nd frame





9 + 6



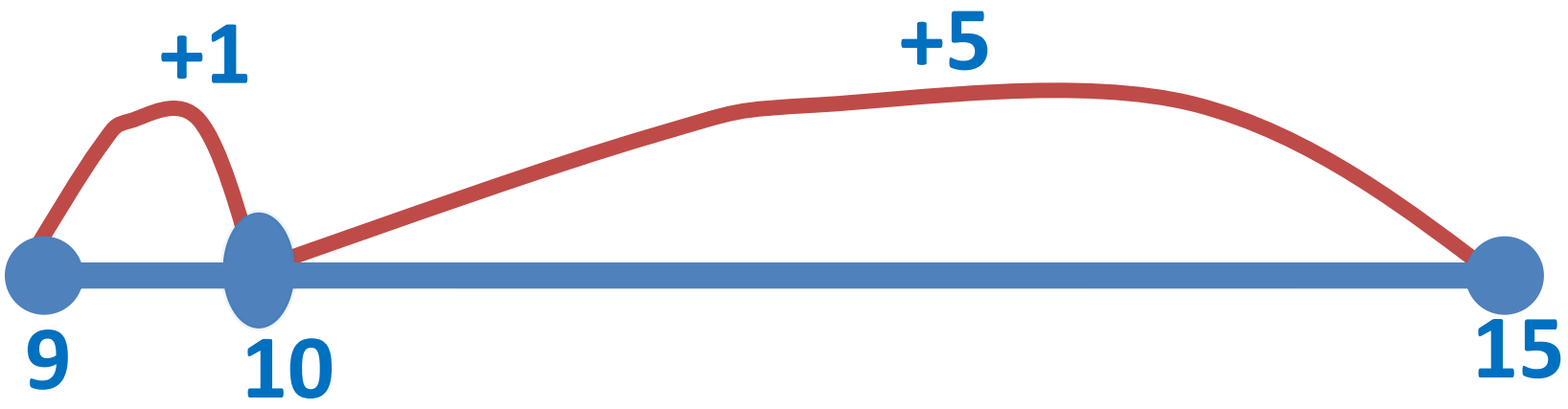
9 + 1 + 5

Can we make a Total 10?

We can partition the 6 into 1 + 5

Builds on fundamental skills and points from session 1

9 + 6

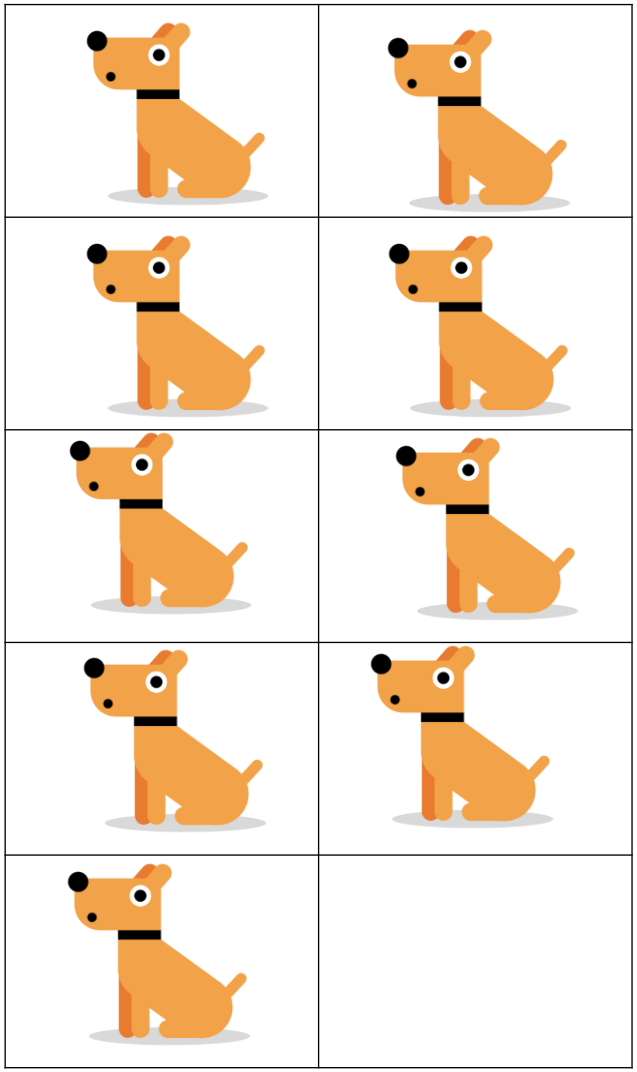


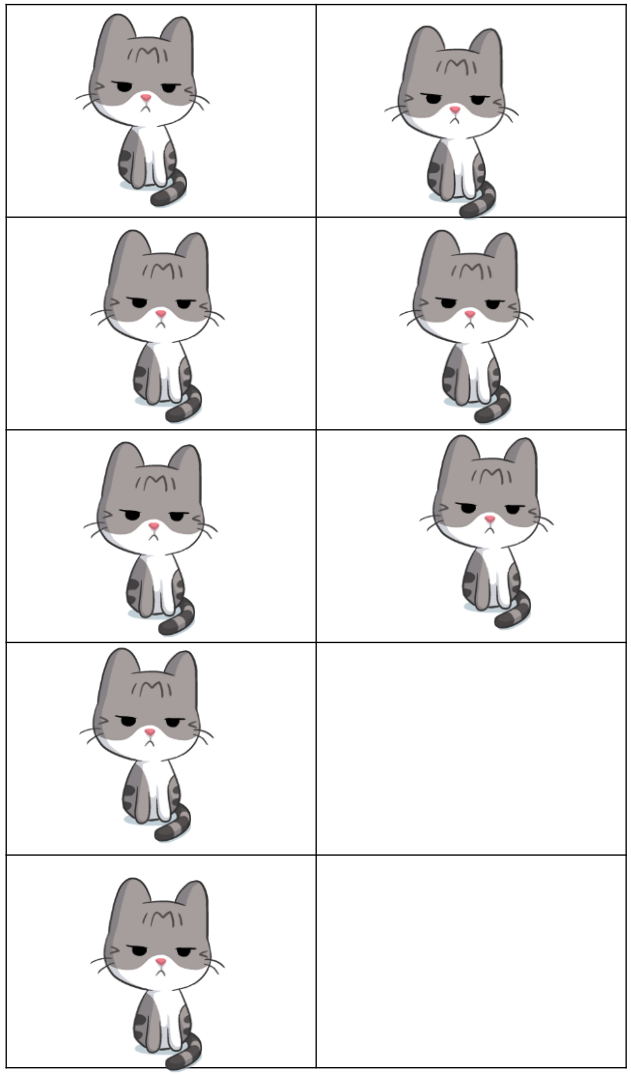
Use the empty number line to record our strategy/thinking

Bob has 9 dogs. Kim has 8 cats. How many pets do they have in total?

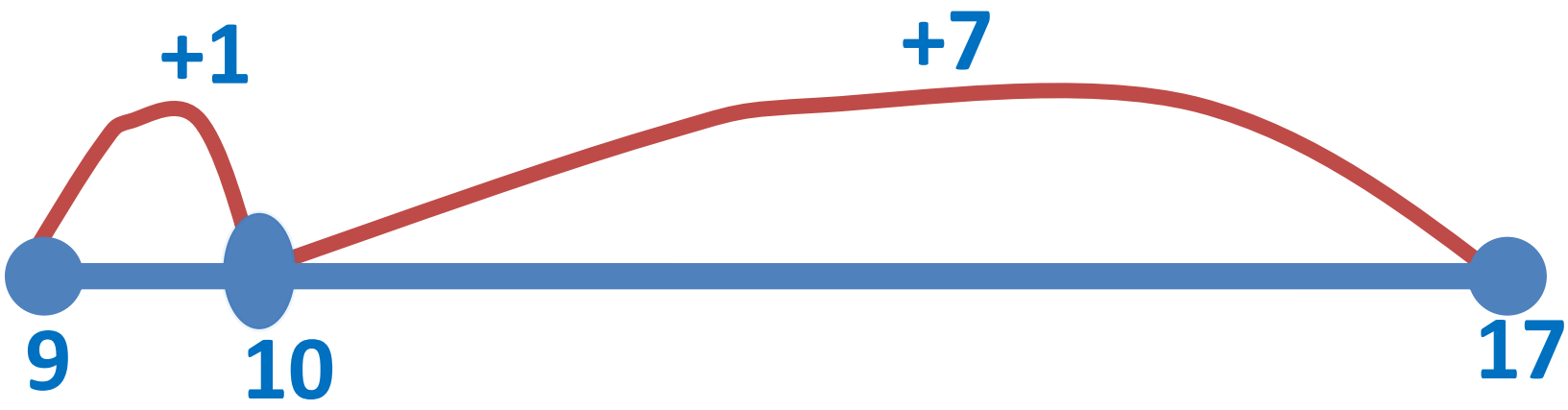
$$9 + 8$$

9 + 8

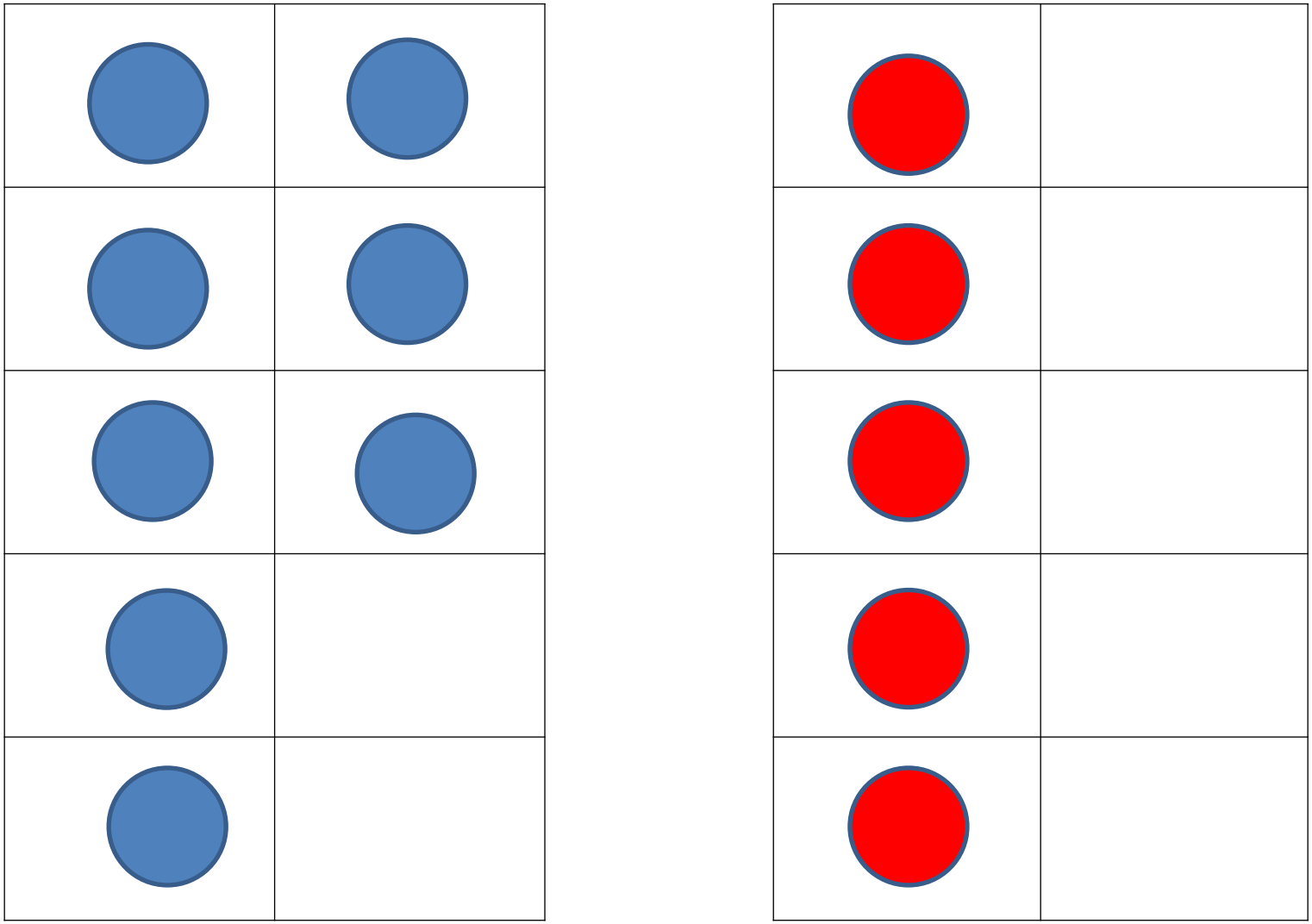




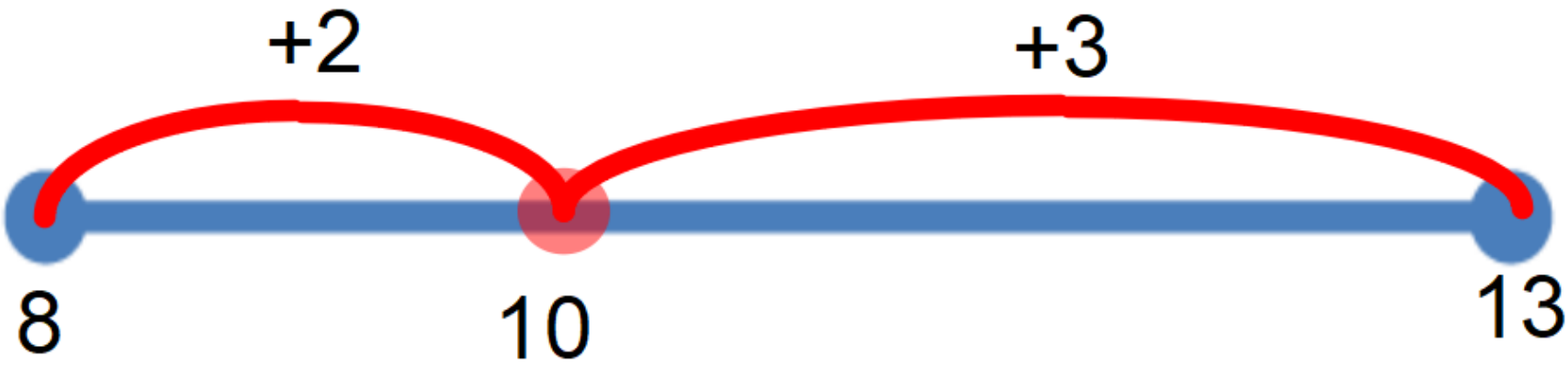
9 + 1 + 7


+1
+7
9
10
17

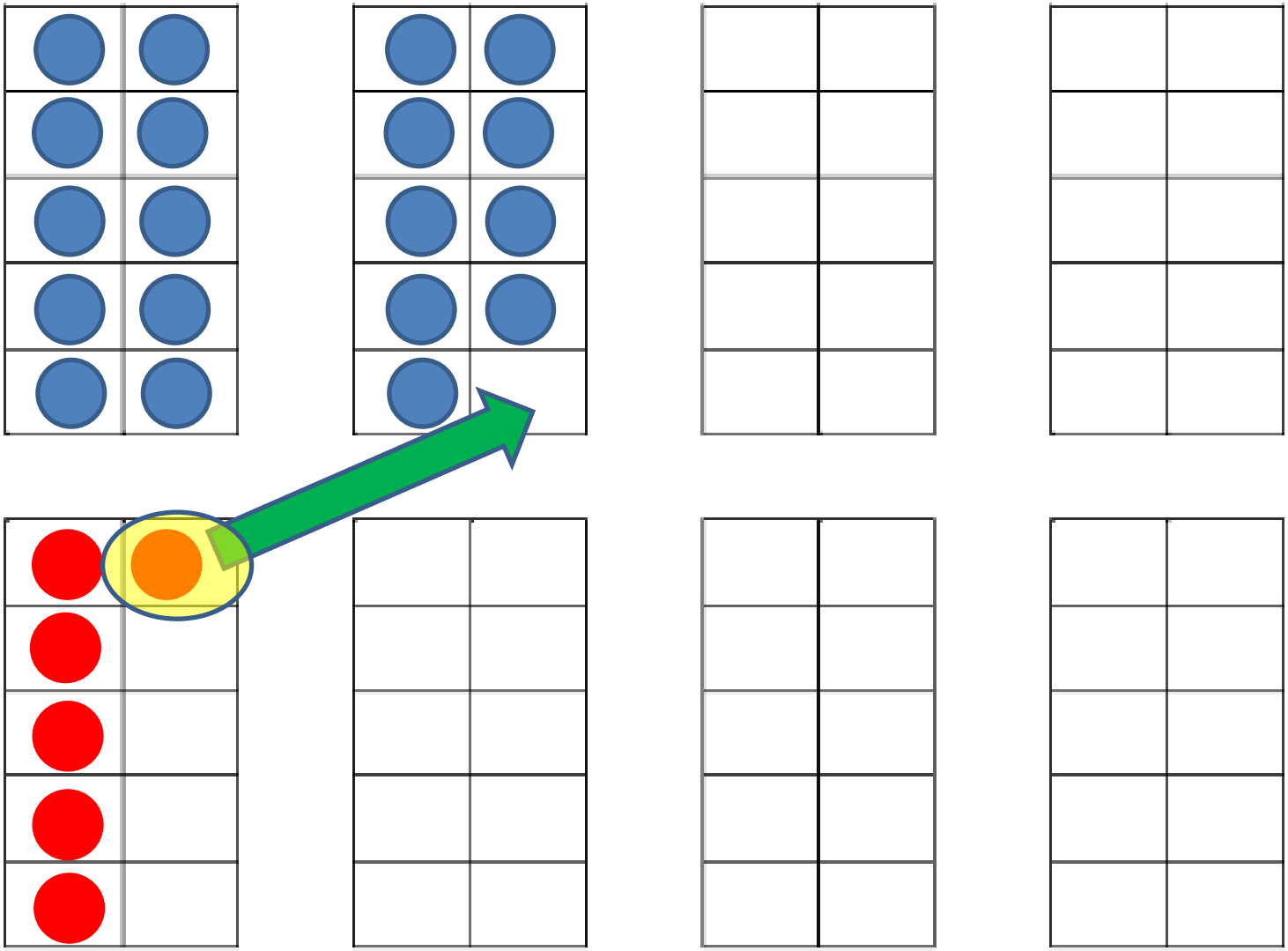
8 + 5



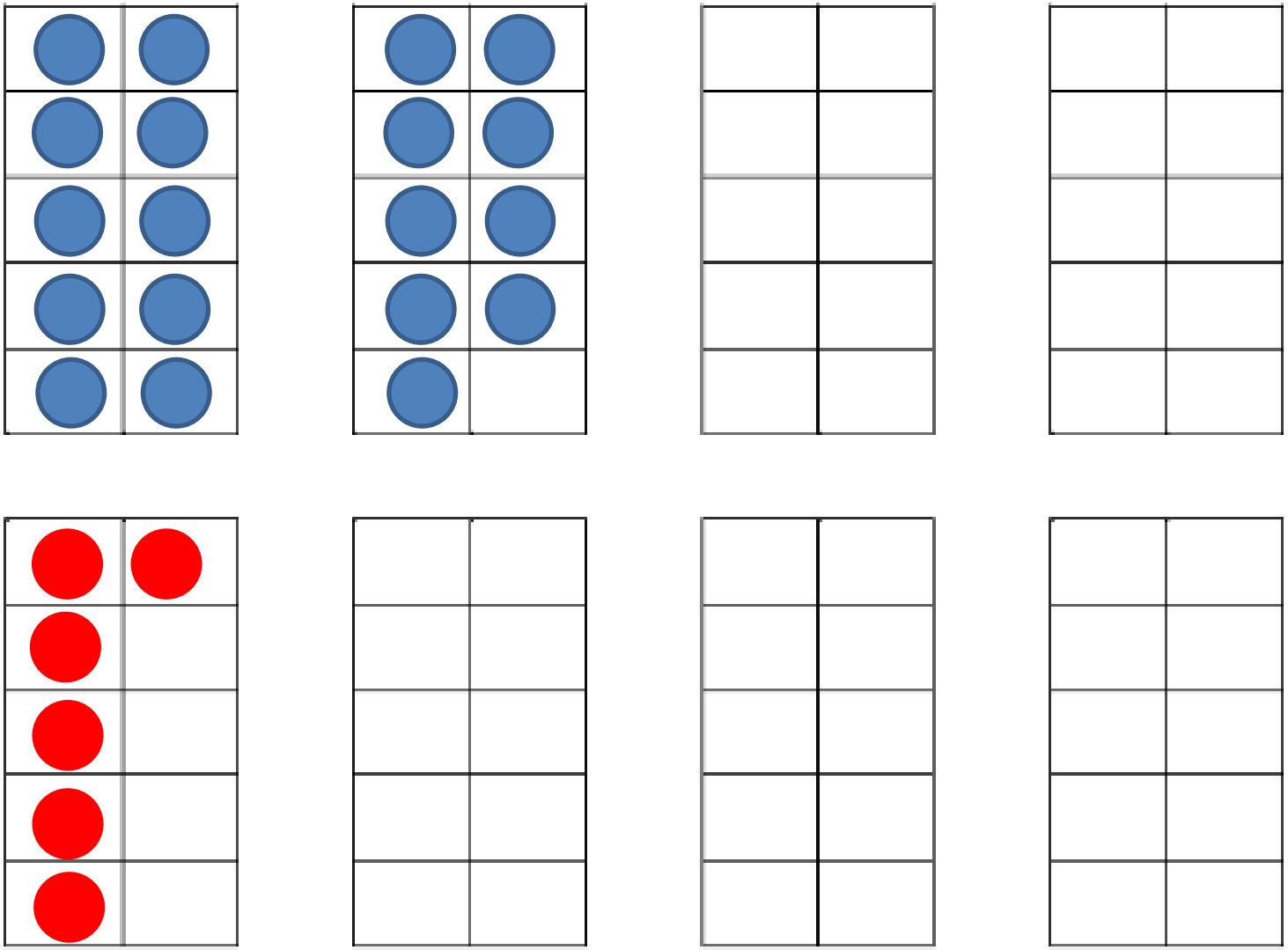
8 + 2 + 3

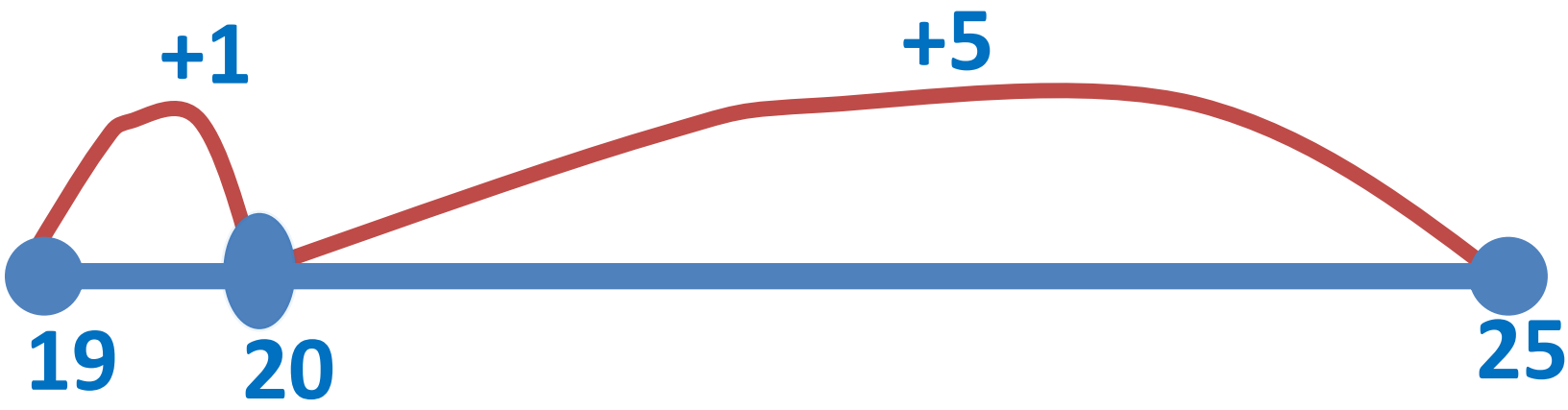

+2
+3
8
10
13

19 + 6

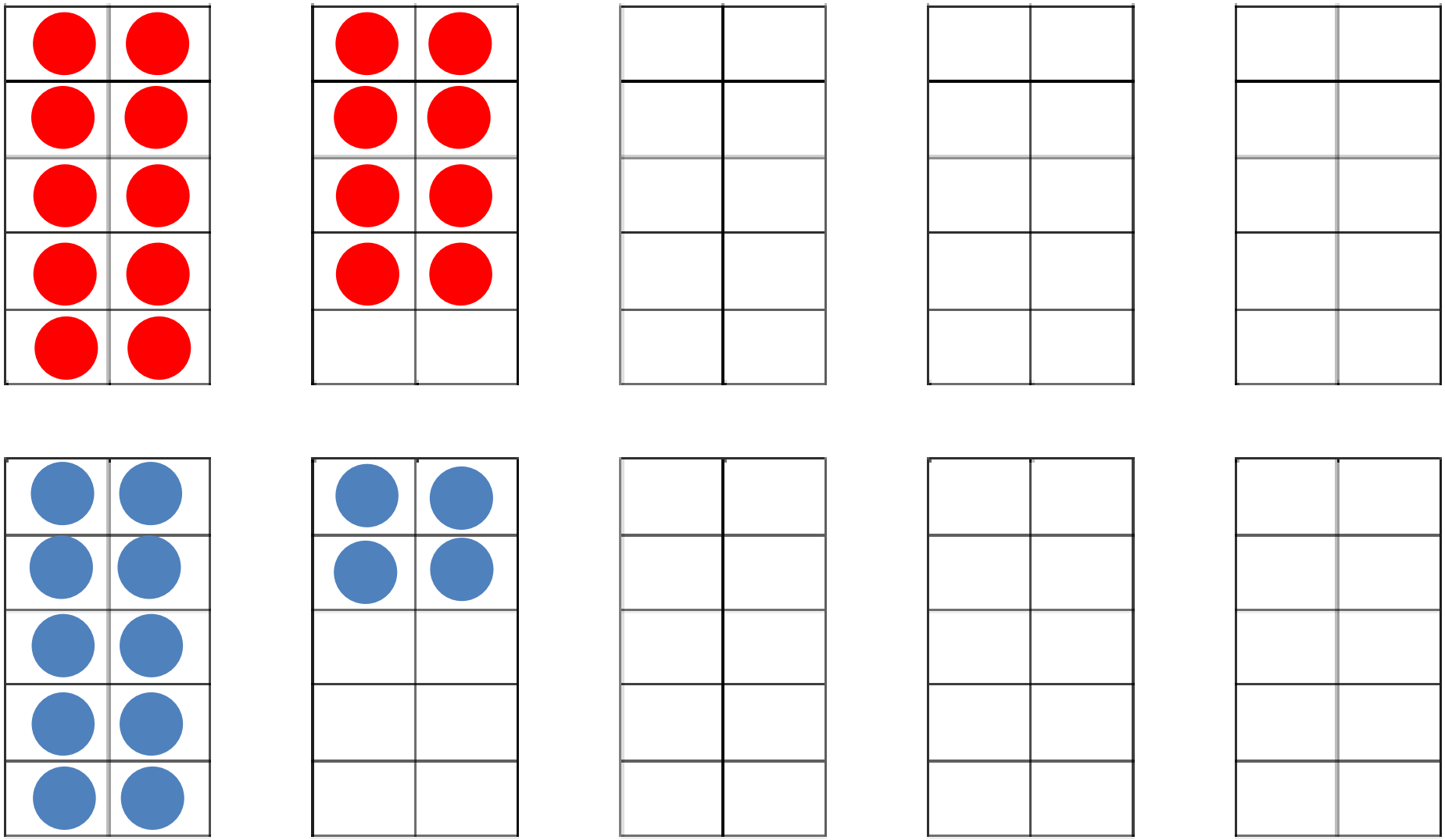


19 + 6




+1
+5
19
20
25

18 + 14



18 + 2 + 12 = 32

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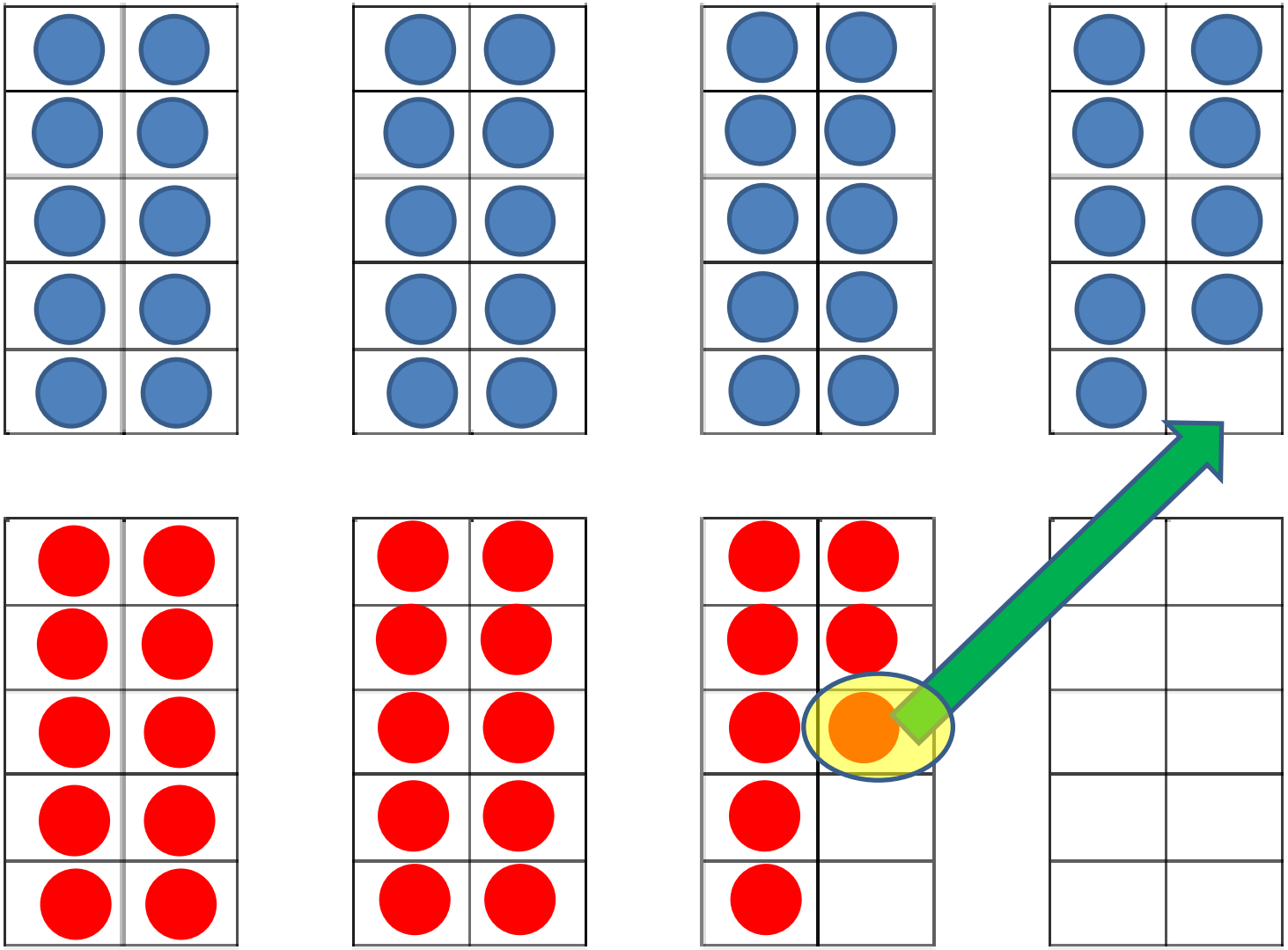
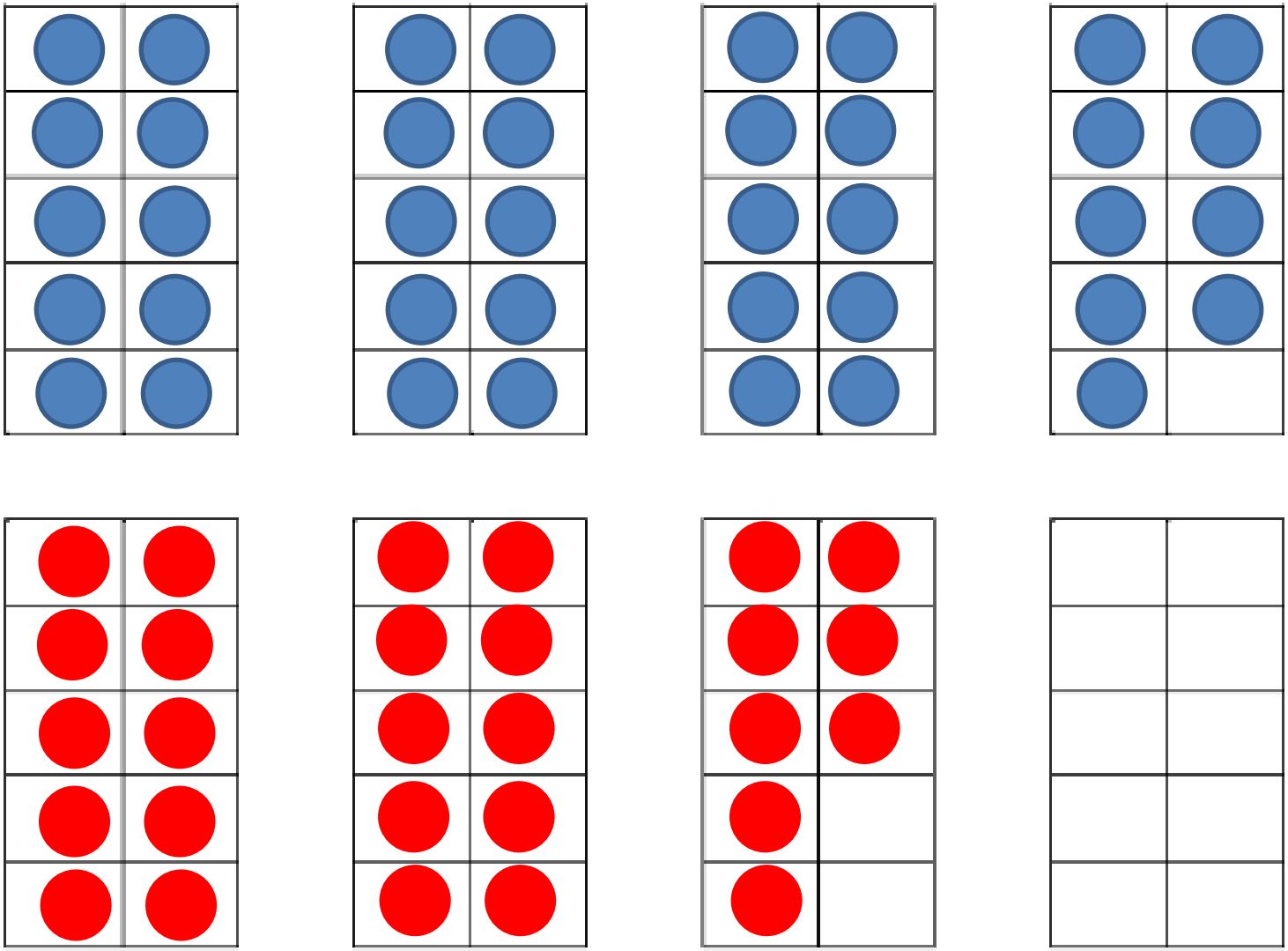
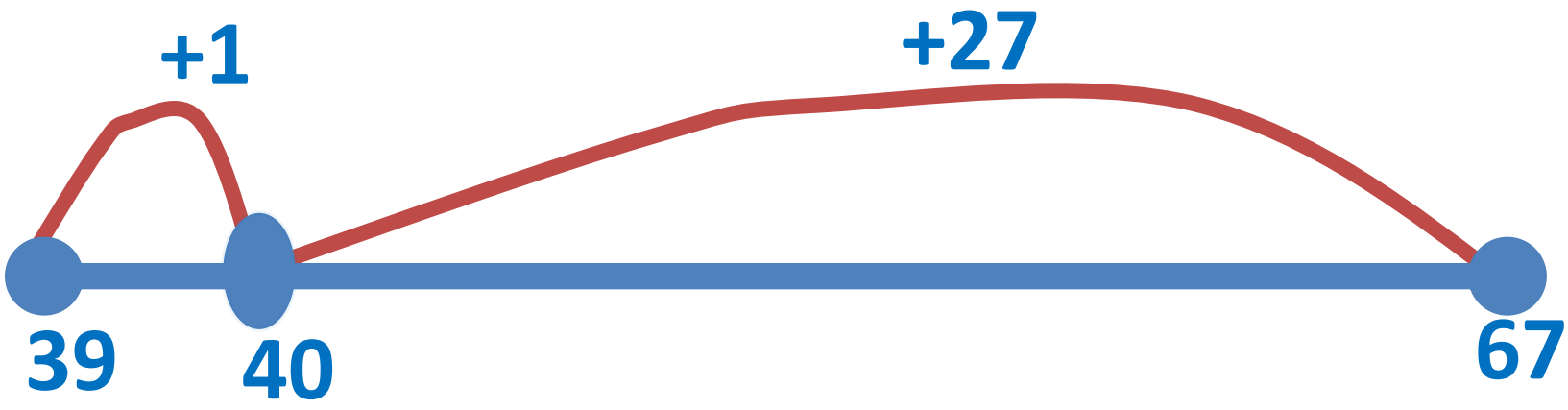
39 + 28



39 + 28




+1
+27
39
40
67

39 + **28**

30 + **20** **9** + **8**

50 + 17

=67

Of course place value partitioning (adding the TENS and ONES) is still a valid strategy here if you wish to use it.

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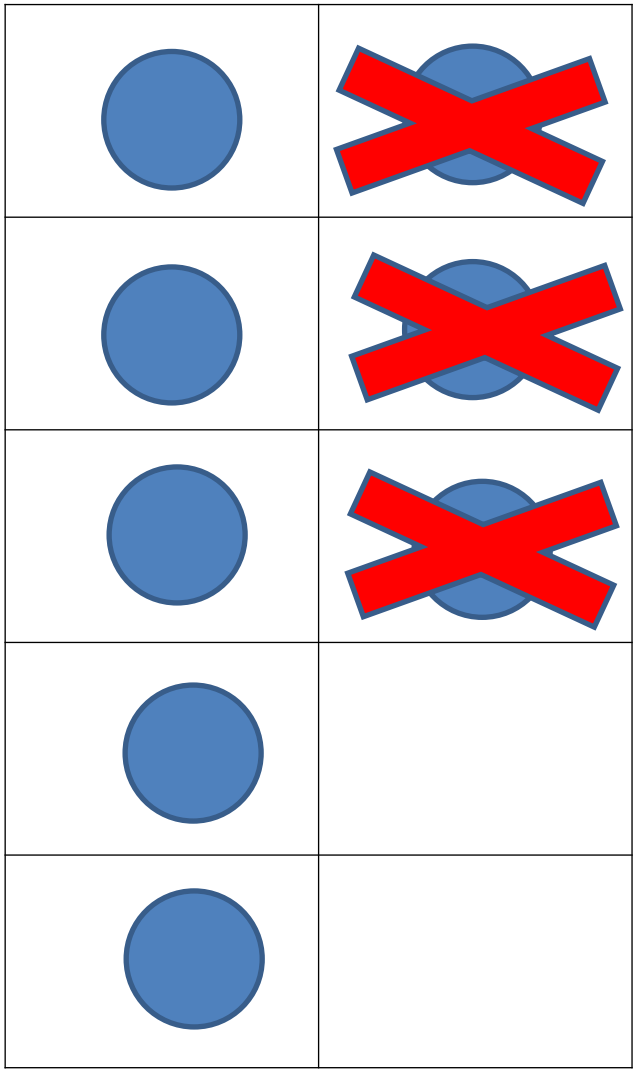
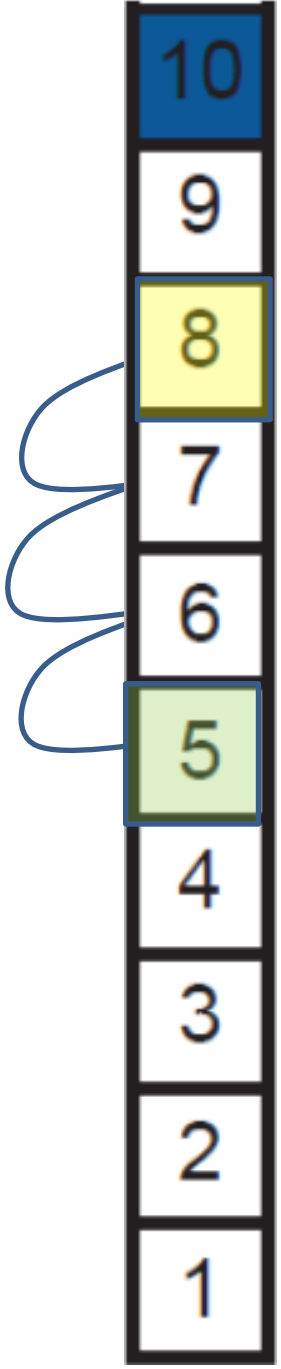
Subtraction Strategy 1
Removal by parts

Draw 8 dots in the 10 frame



Now cross out 3 dots

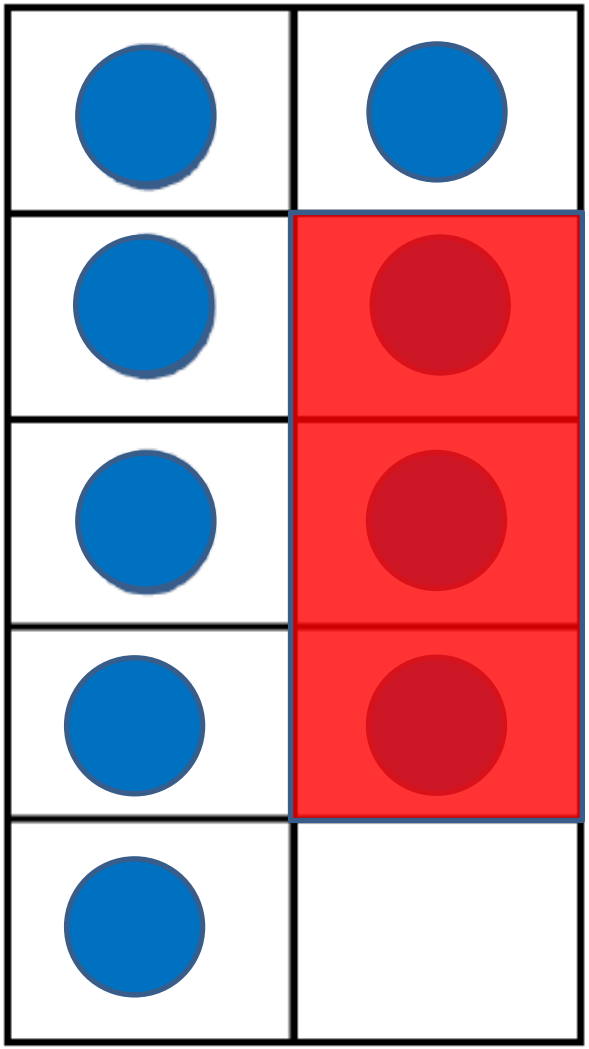
$$8 - 3 = 5$$



$8 - 3 = 5$

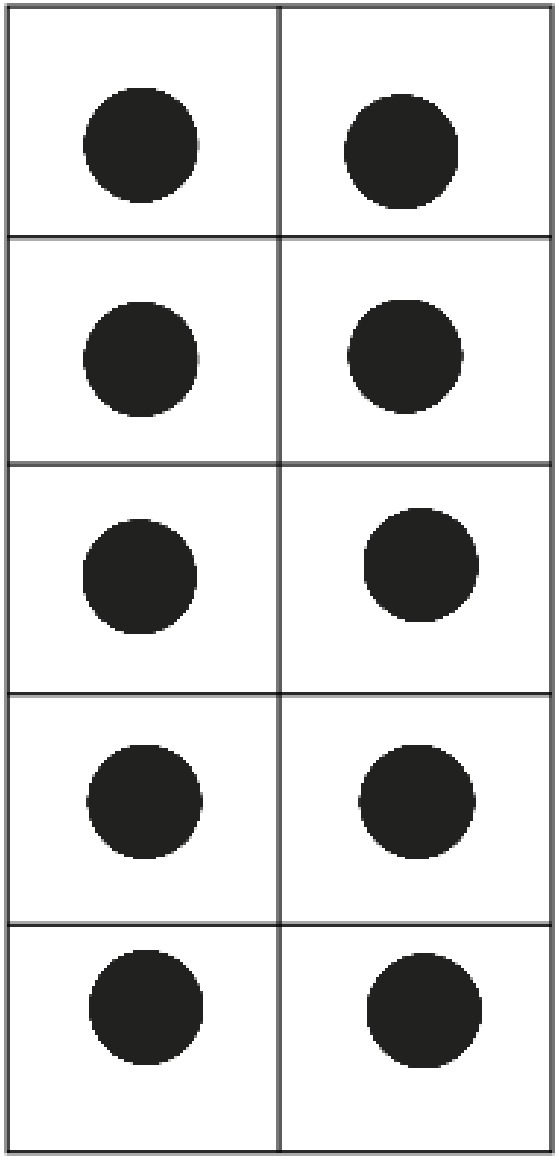
$5 = 8 - 3$

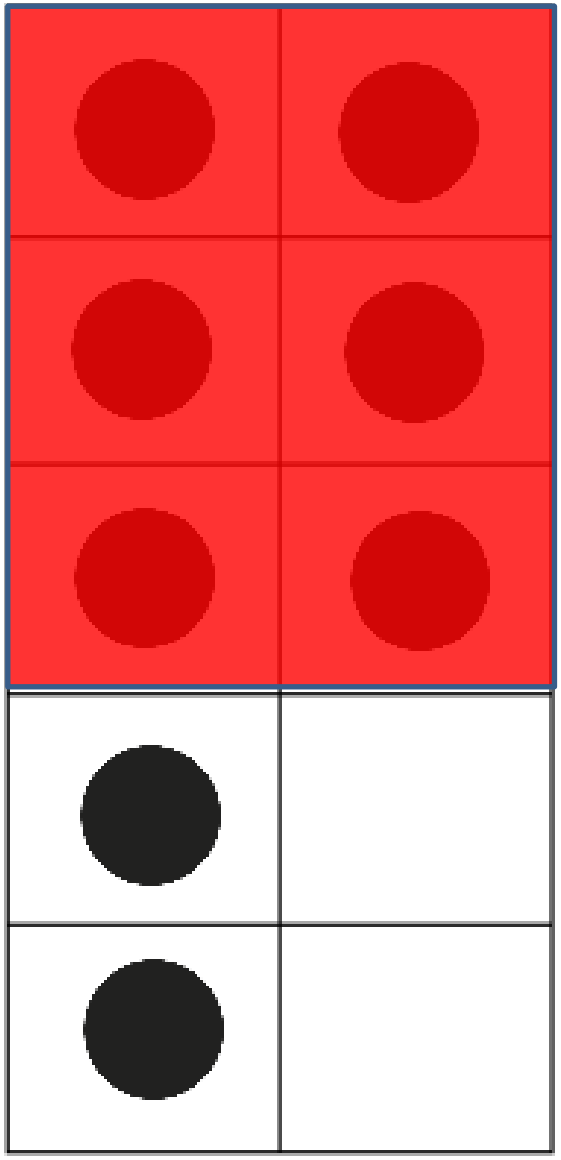
9 - 3 = 6



count on us
inspire.innovate.educate

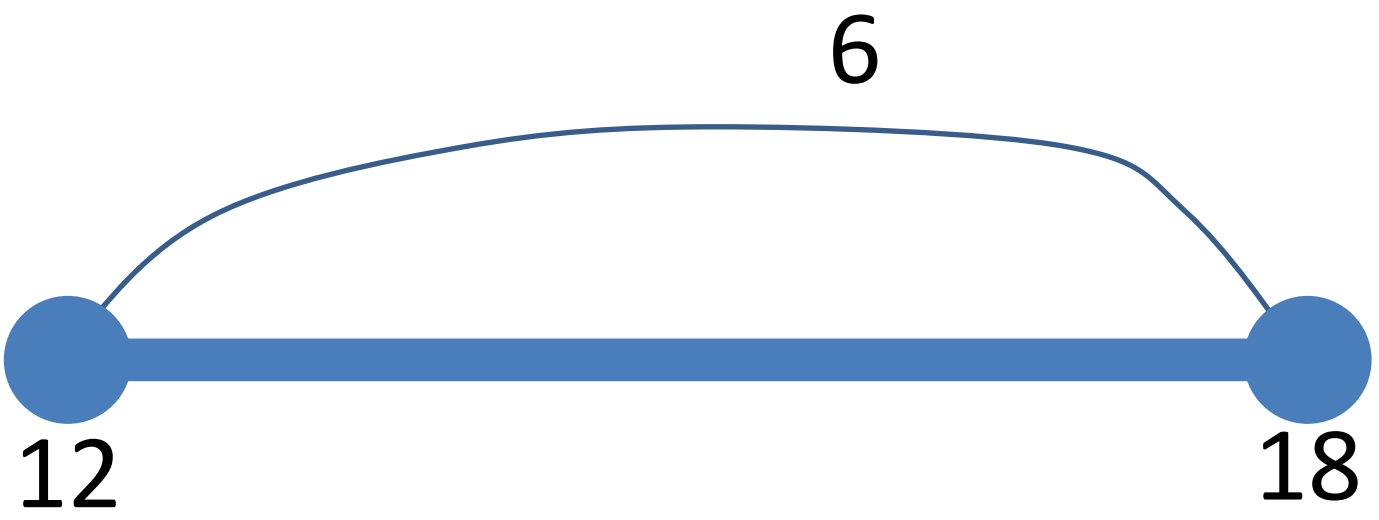
18 - 6 = 12



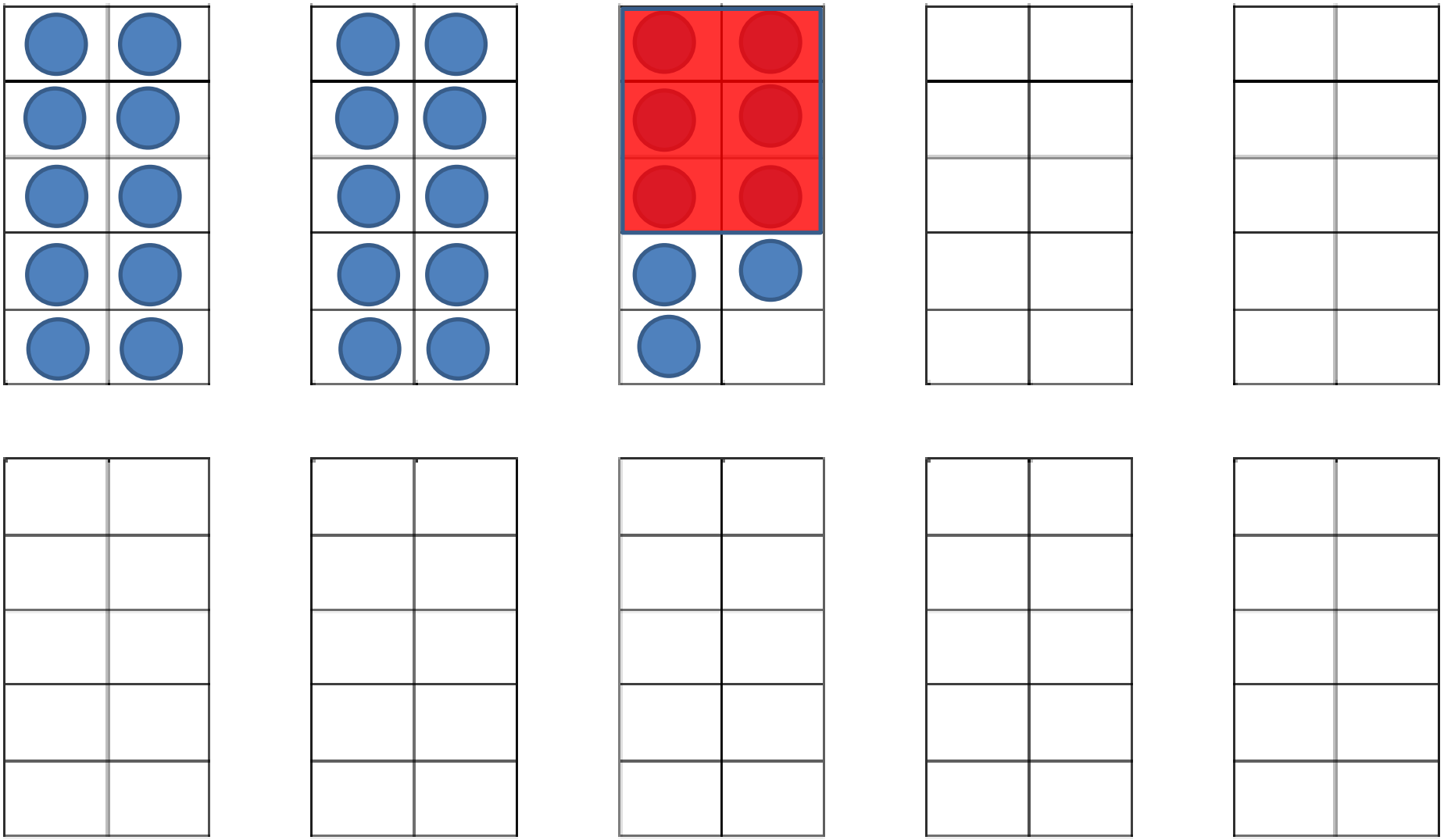


?? + 6 = 18

18 – 6

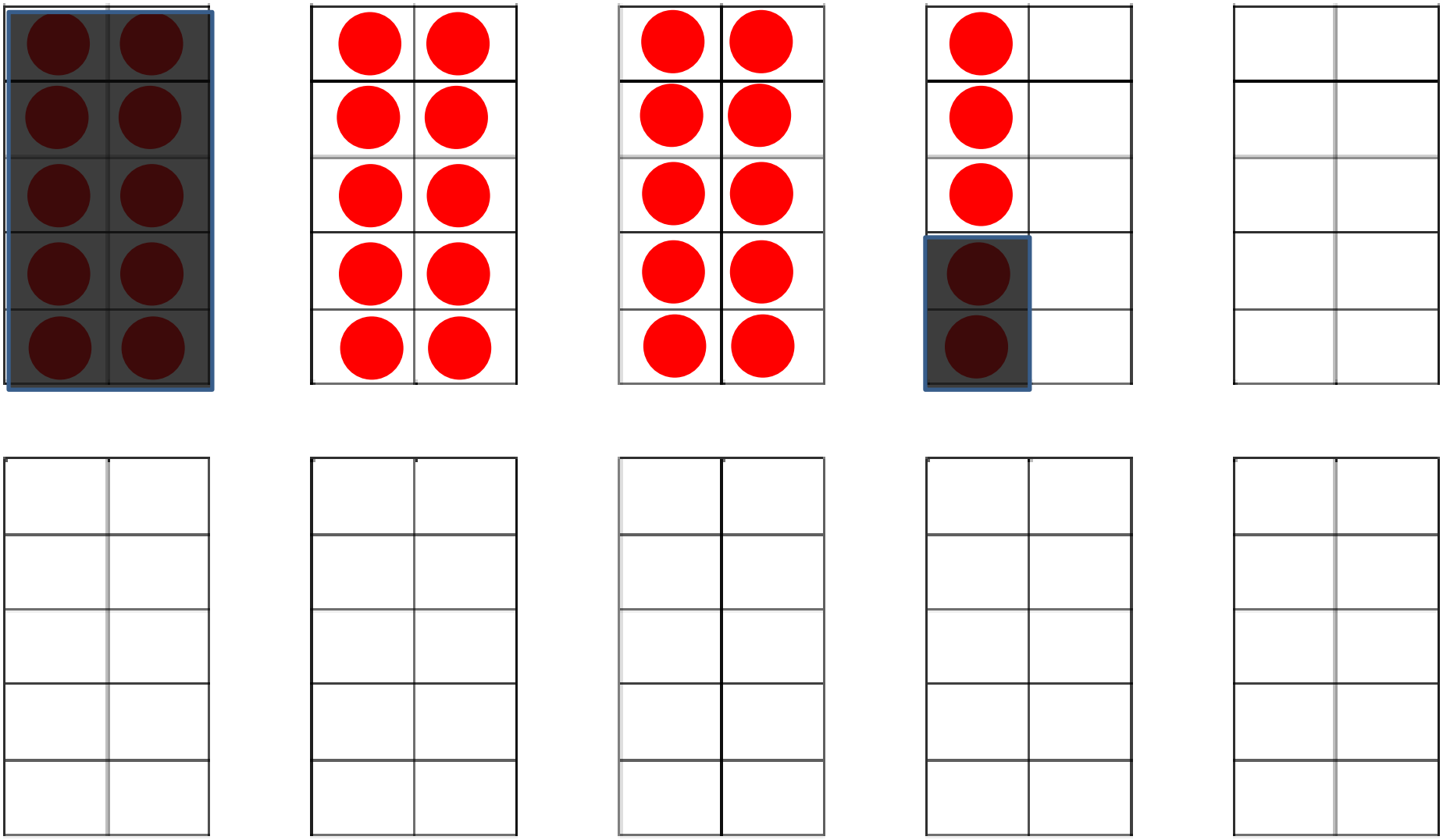

6
12
18

29 - 6 = 23



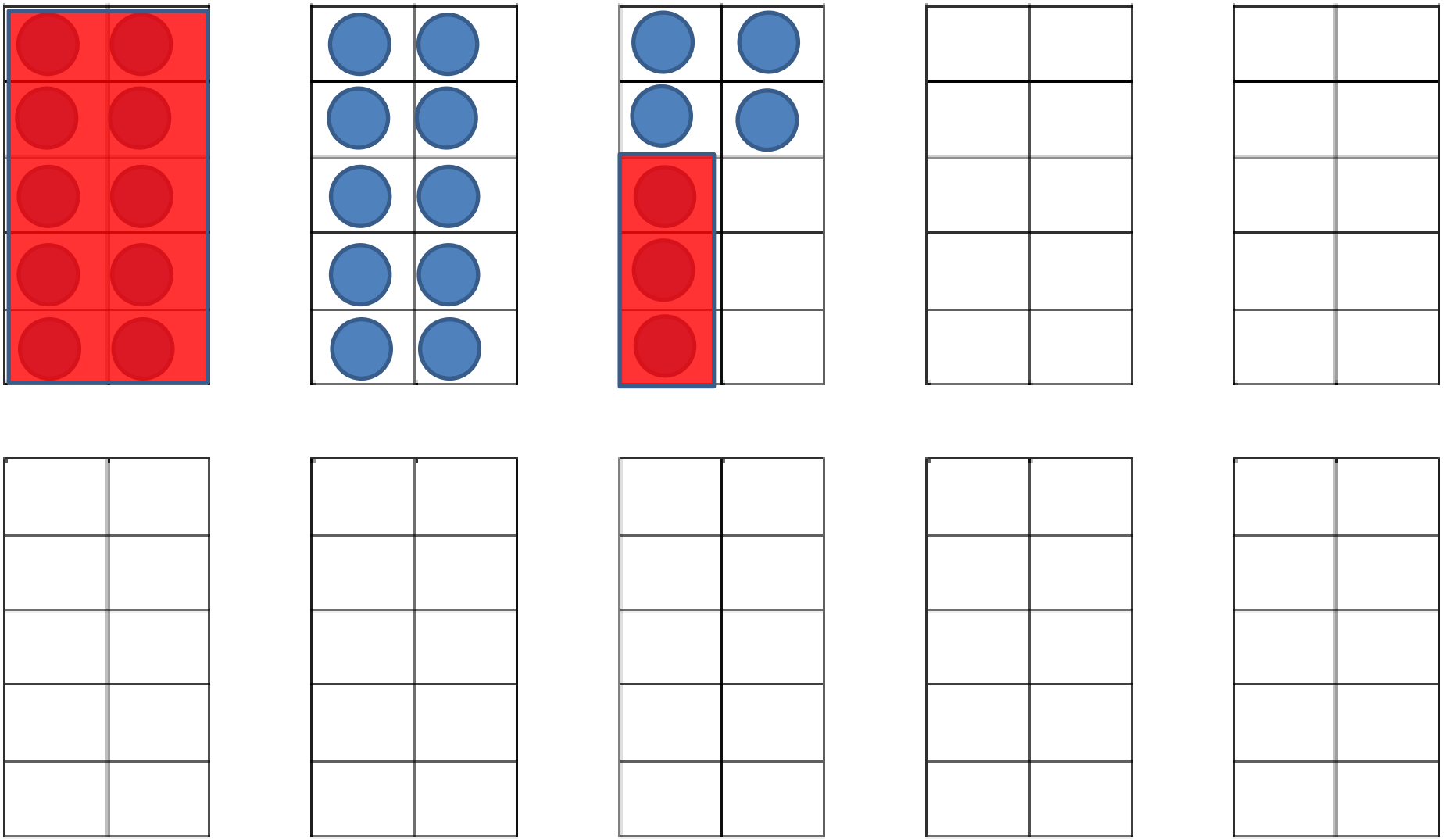
count on us
inspire.innovate.educate

35 - 12 = 23



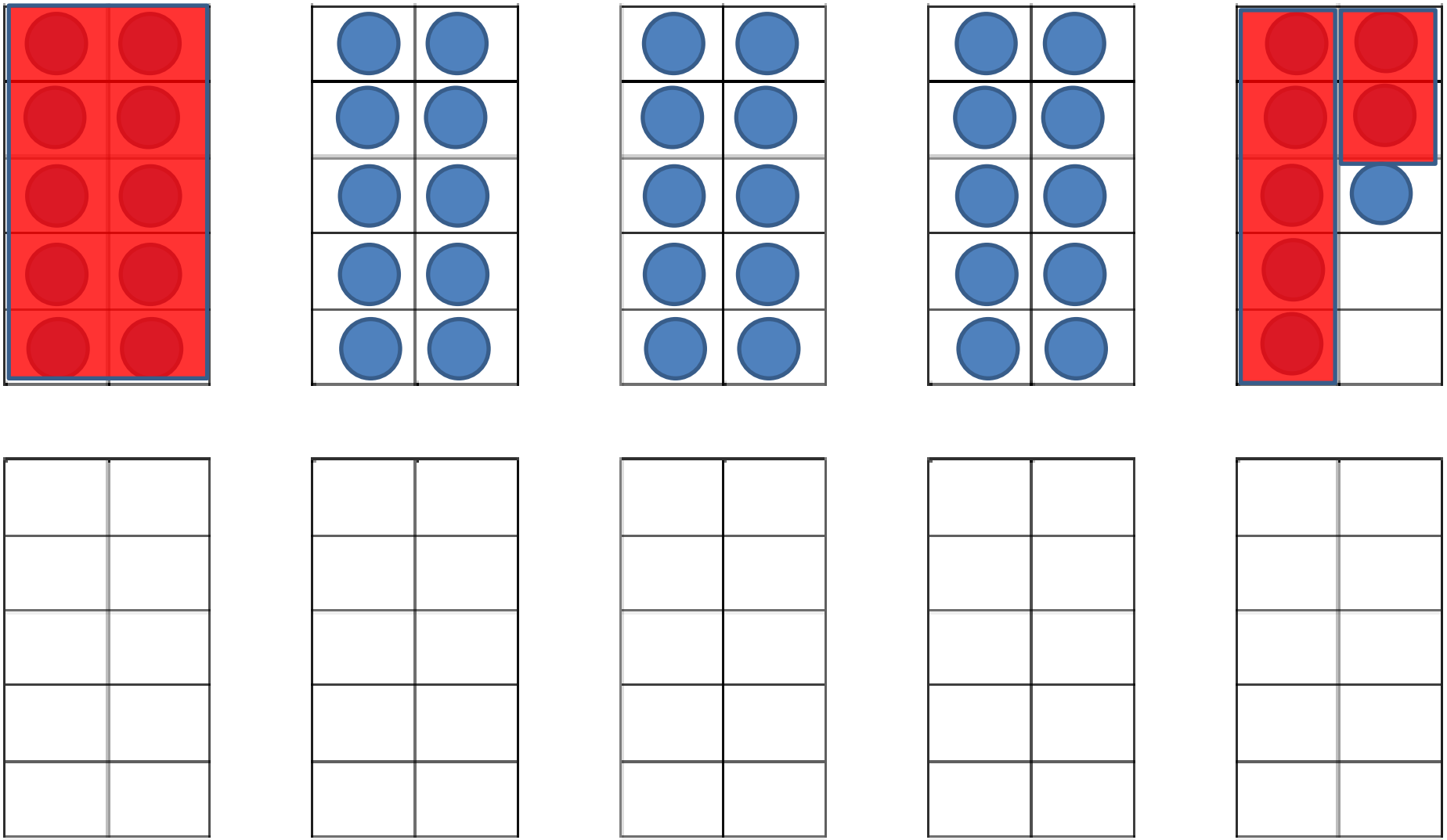
count on us
inspire.innovate.educate

27 - 13 =14



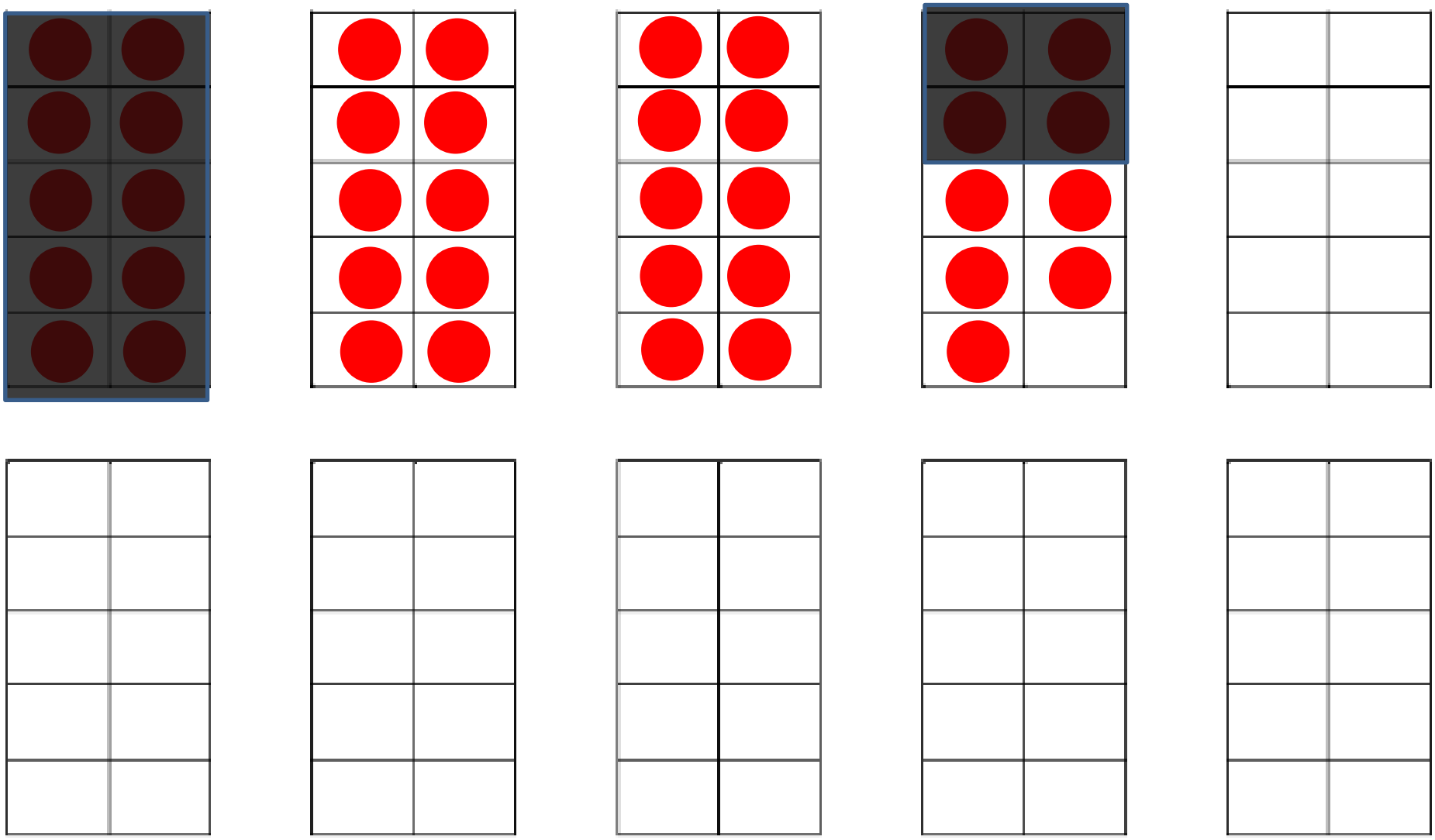
count on us
inspire.innovate.educate

48 - 17 = 31



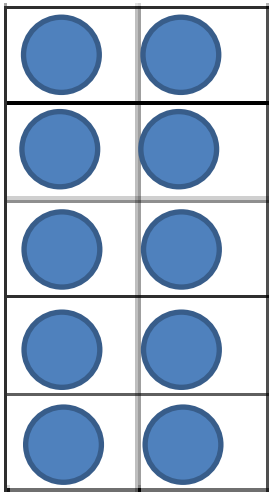
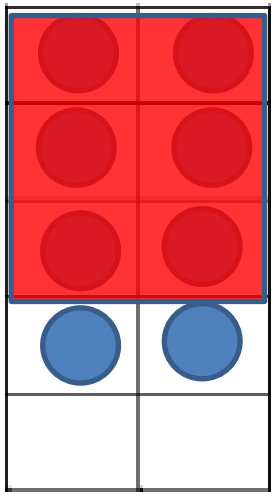
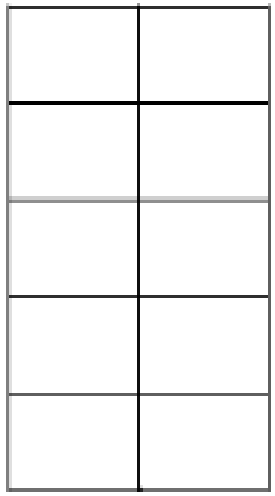
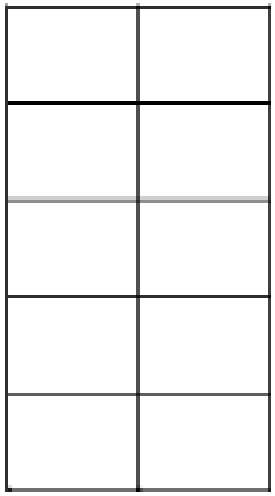
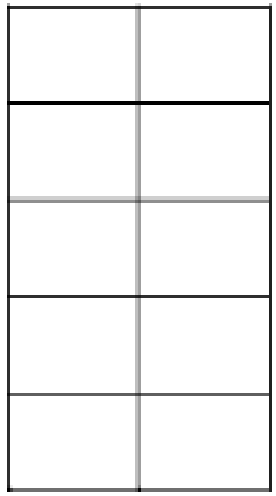
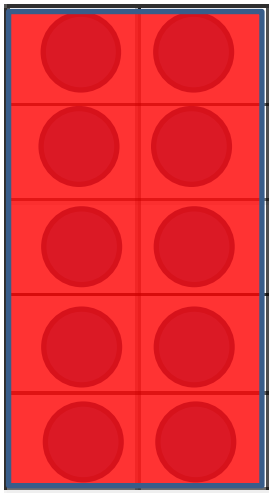
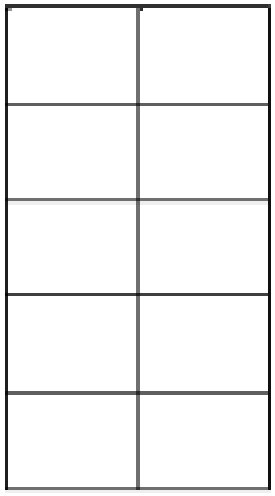
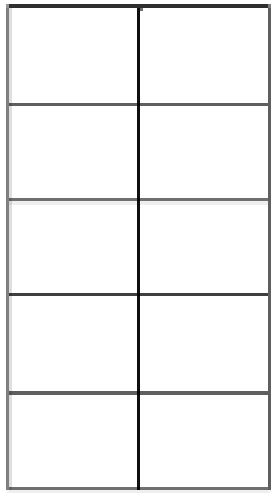
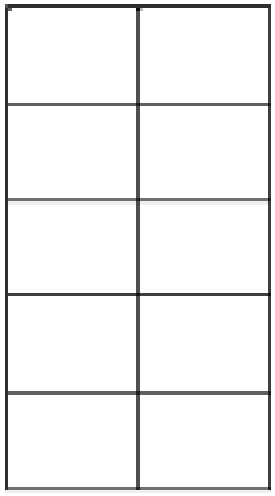
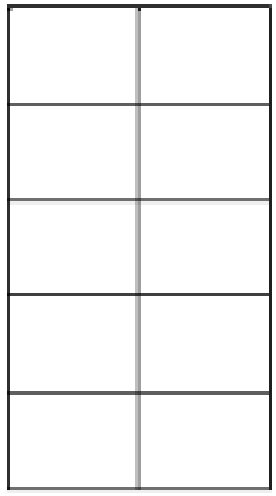
count on us
inspire.innovate.educate

39 - 14 = 25



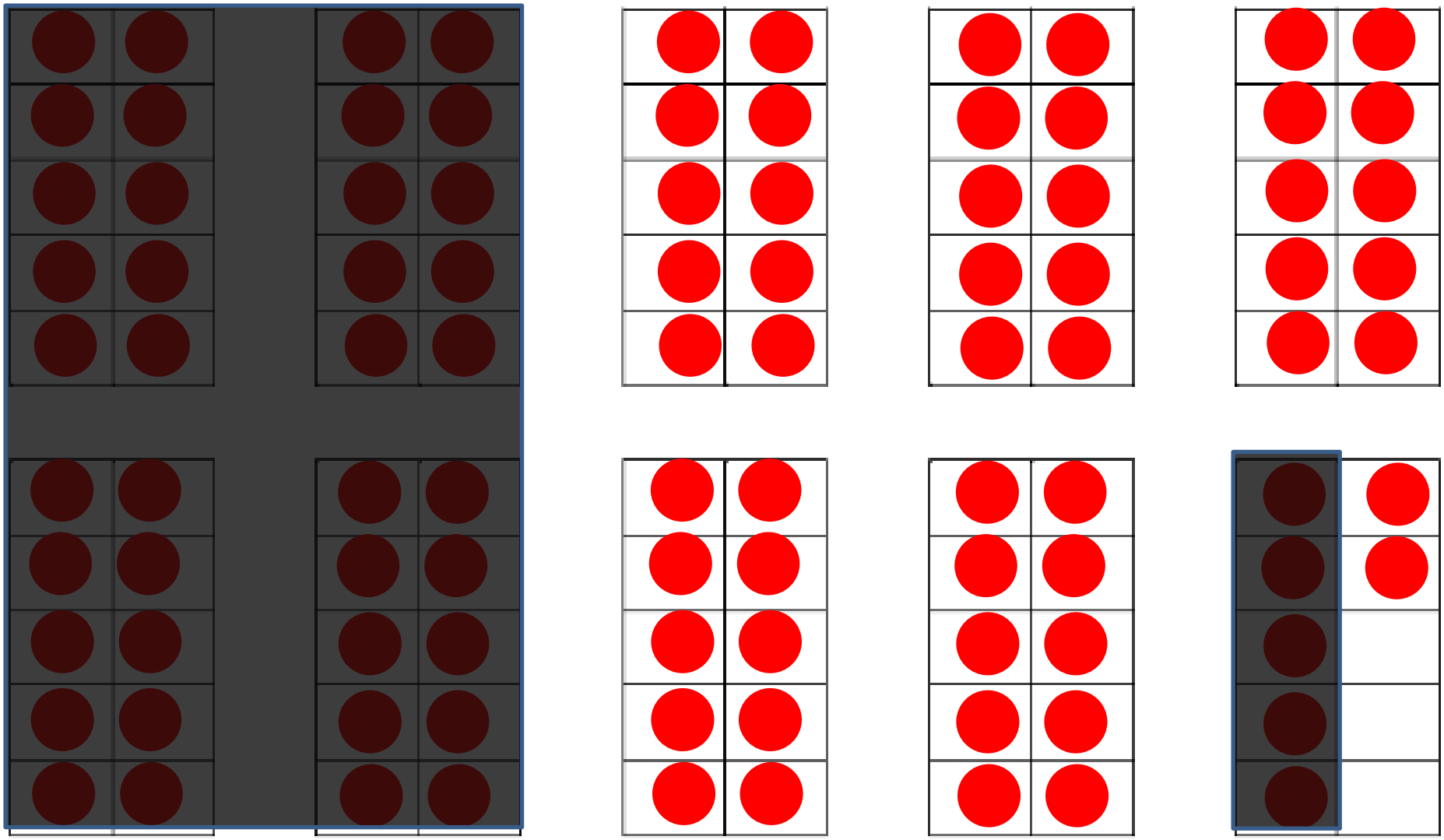
count on us
inspire.innovate.educate

28 - 16 = 12

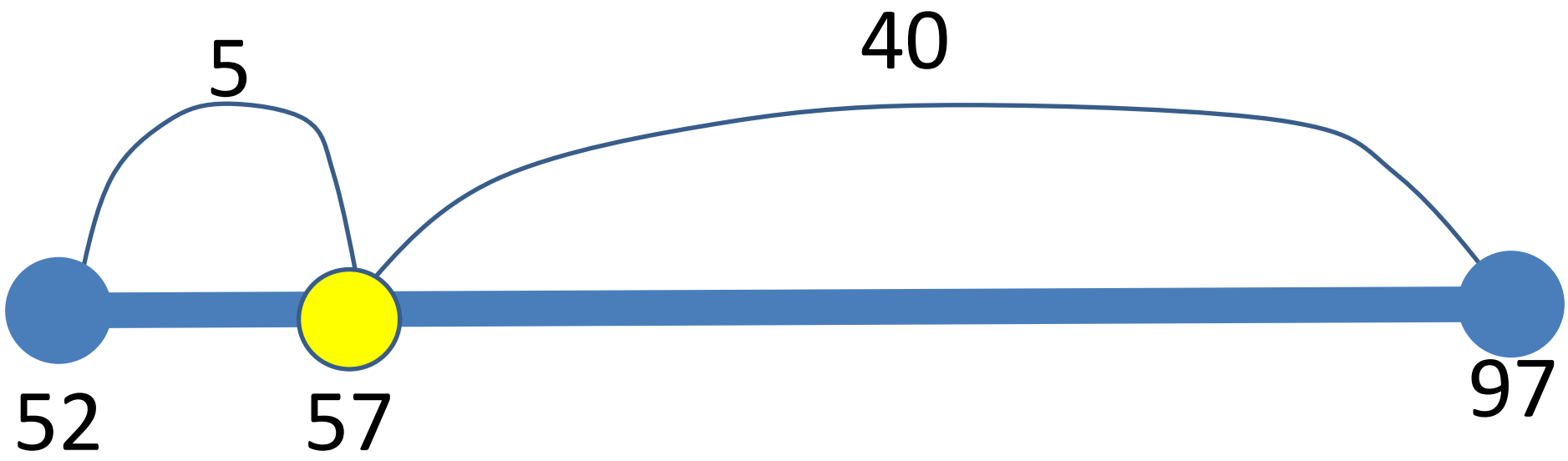











count on us
inspire.innovate.educate

97 - 45 = 52



count on us
inspire.innovate.educate


5
40
52
57
97

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

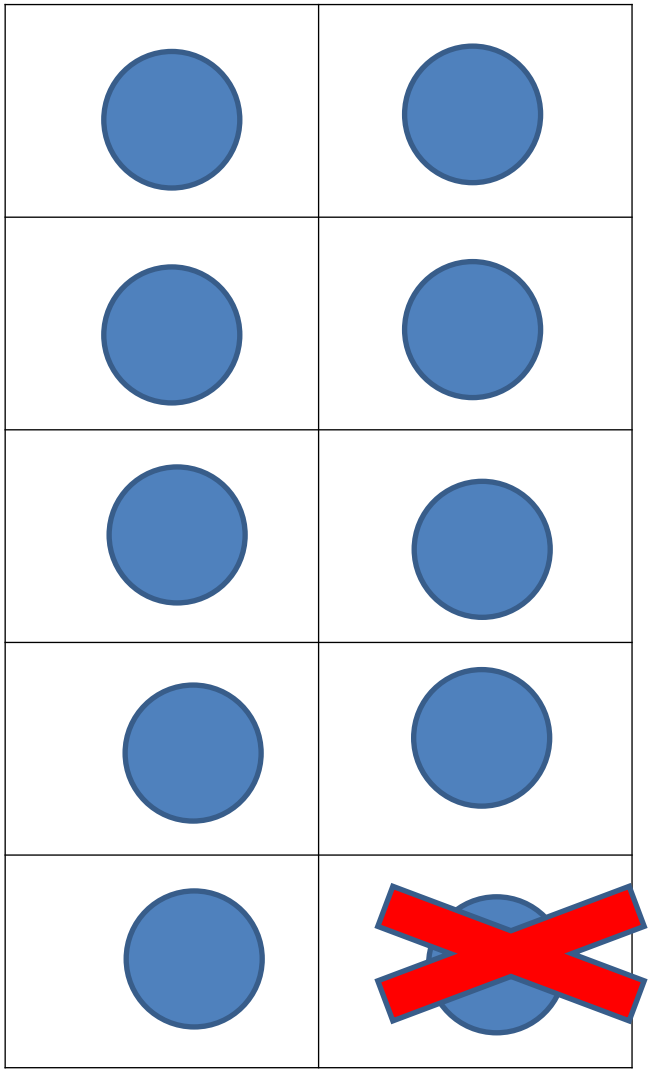
97 – 45 = 52

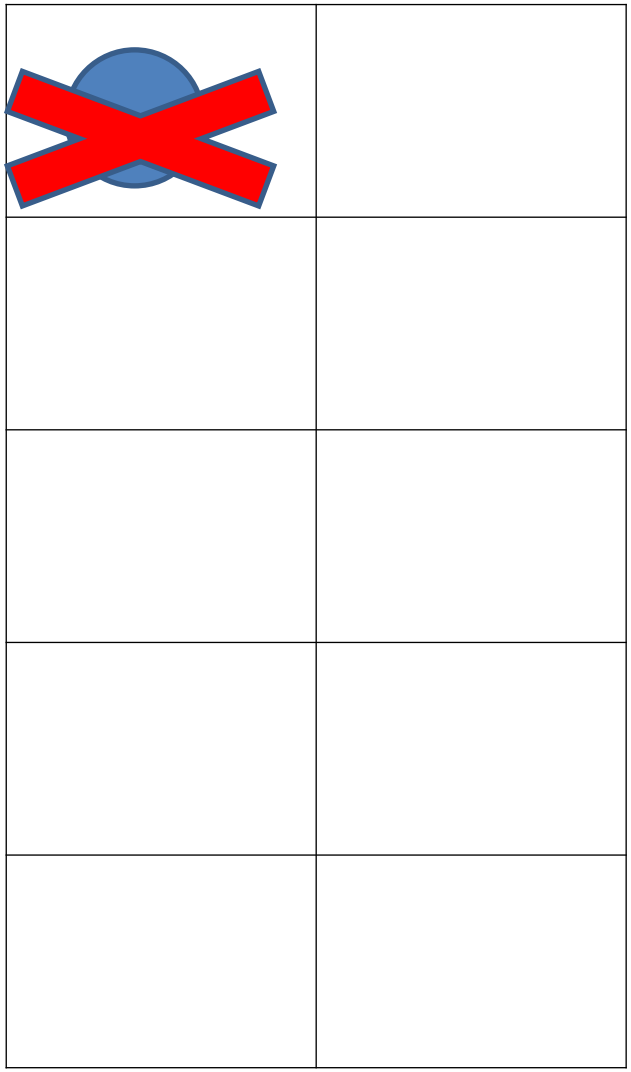
Twitter : @CountOnUsEd

count on us
inspire.innovate.educate

Subtraction Questions
To promote discussion

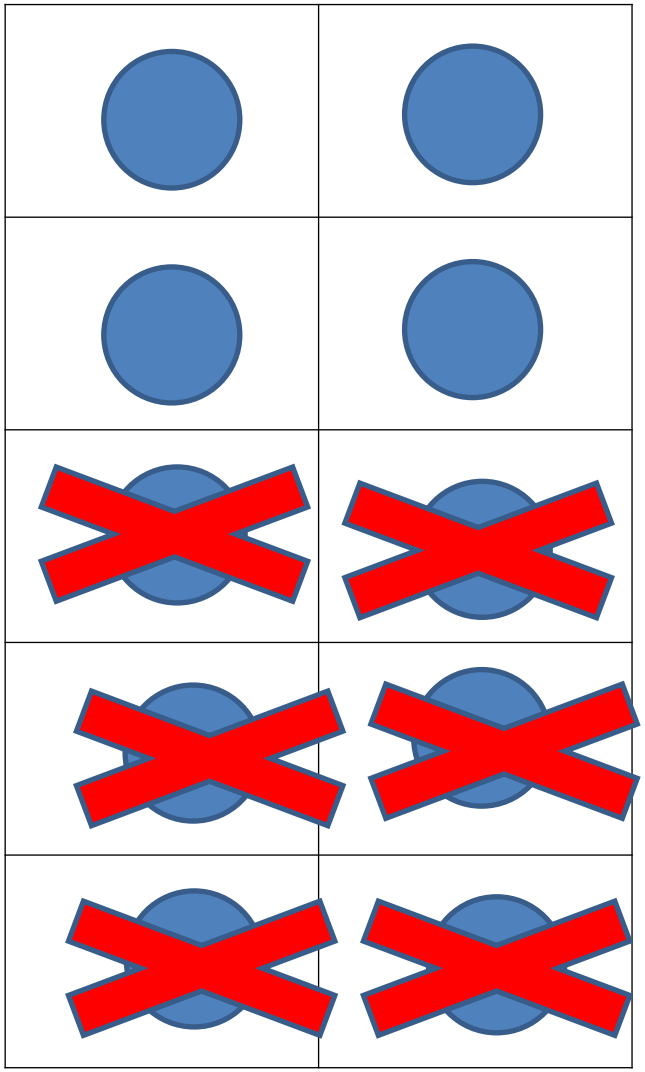
11 - 2

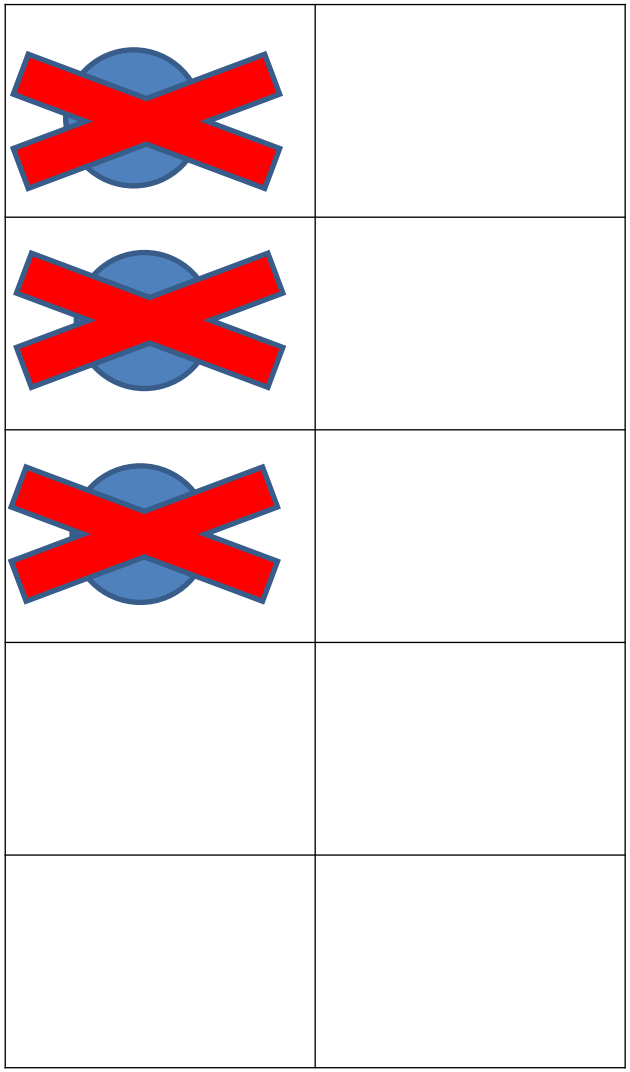




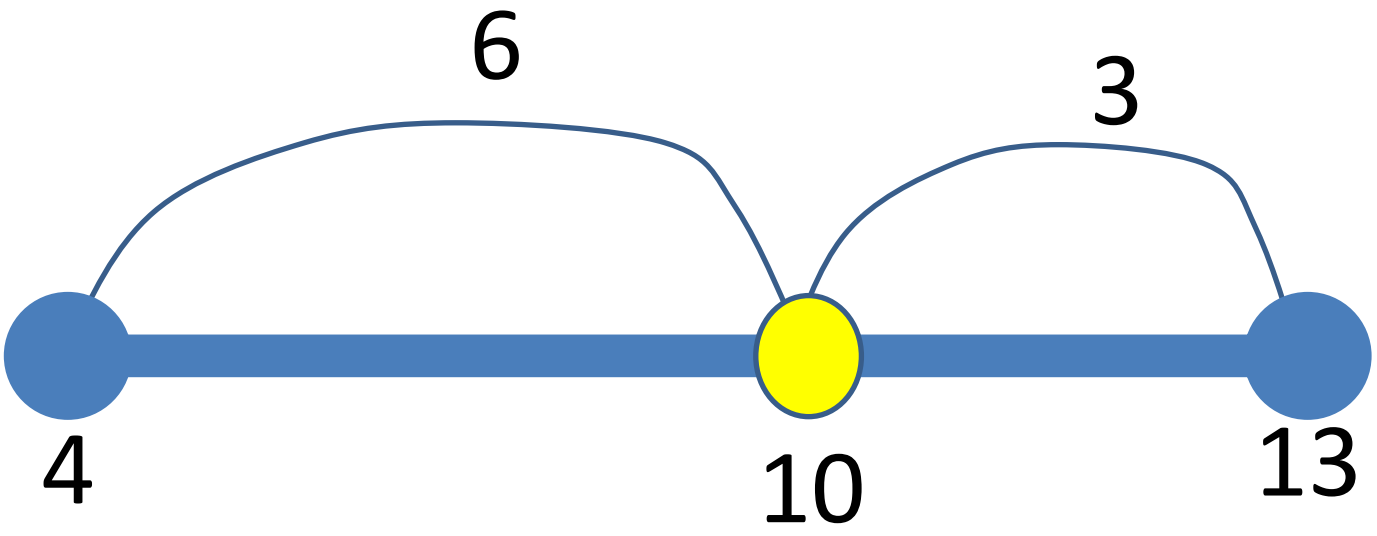
11 - 2 = 9

13 – 9





13 – 3 – 6 = 4

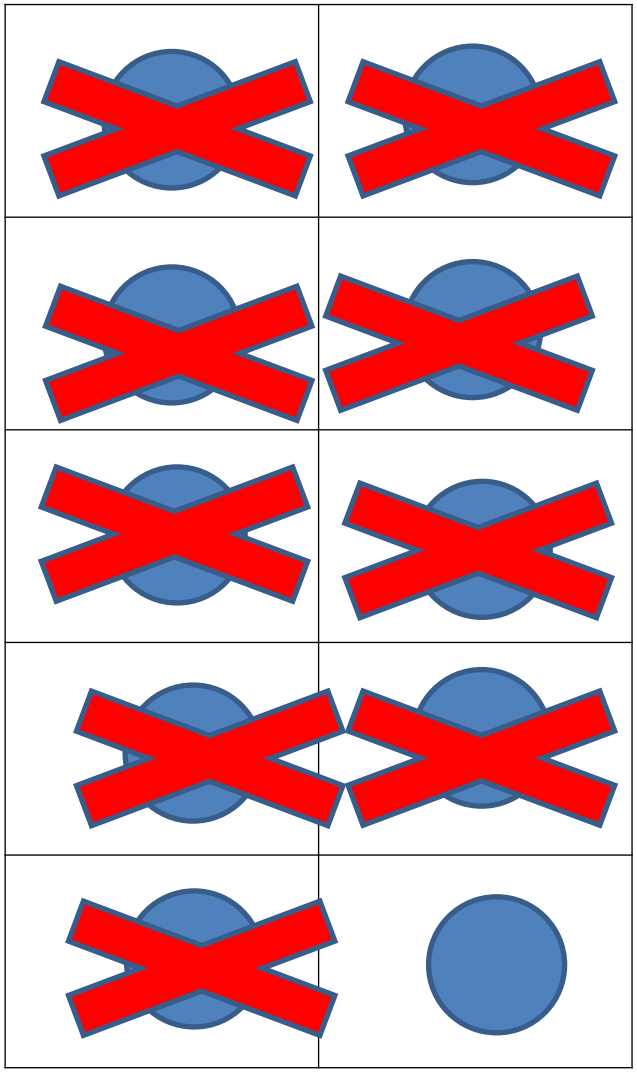

6
3
4
10
13

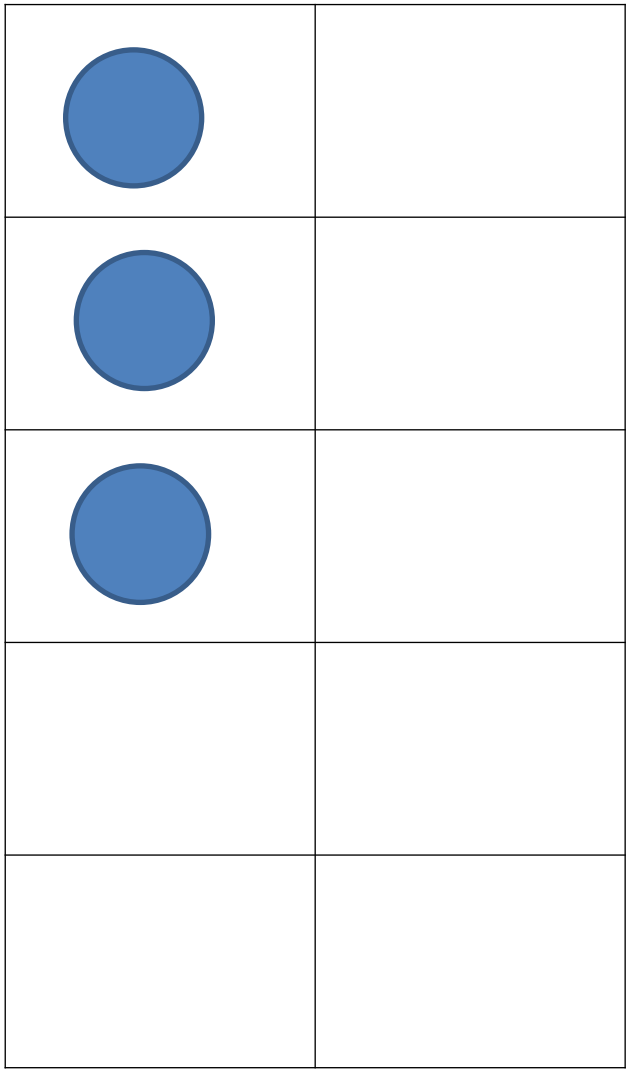
count on us

inspire.innovate.educate

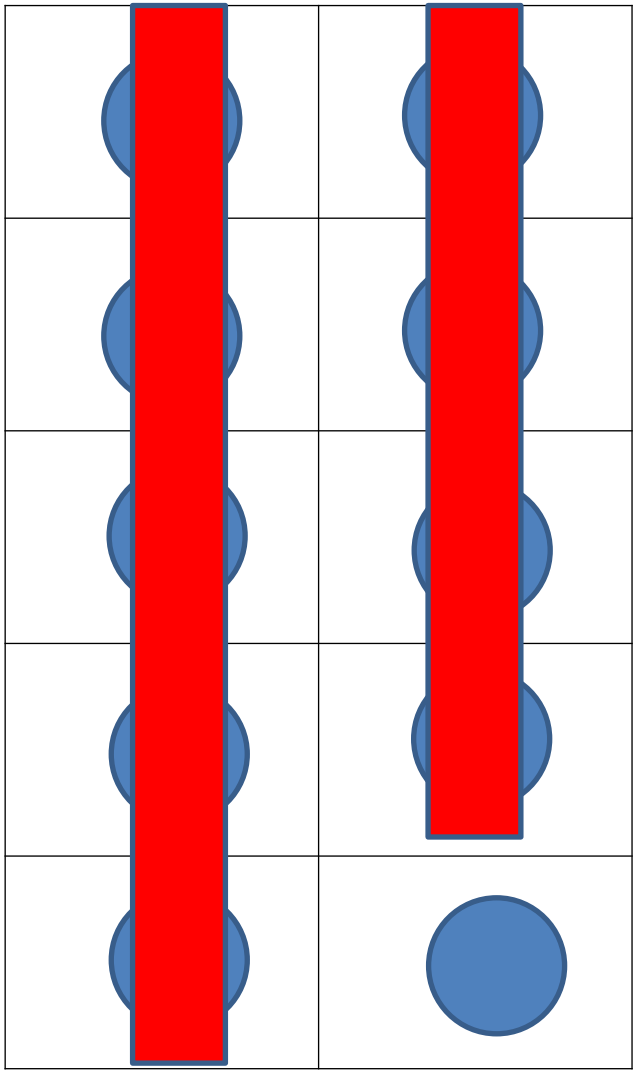
Subtraction Strategy 2
Count Up/On

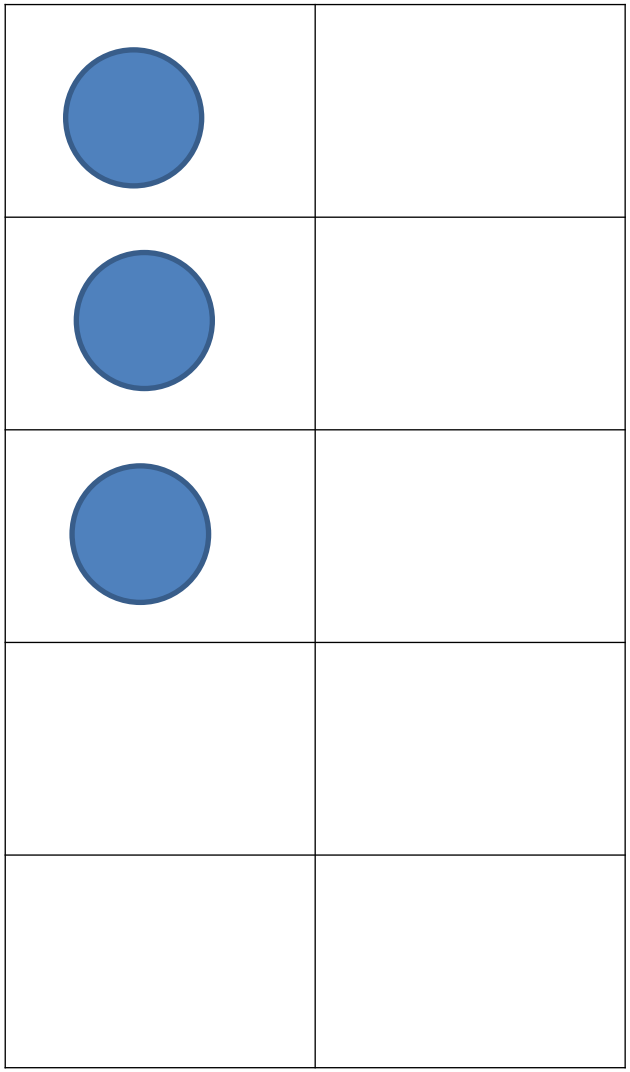
13 - 9





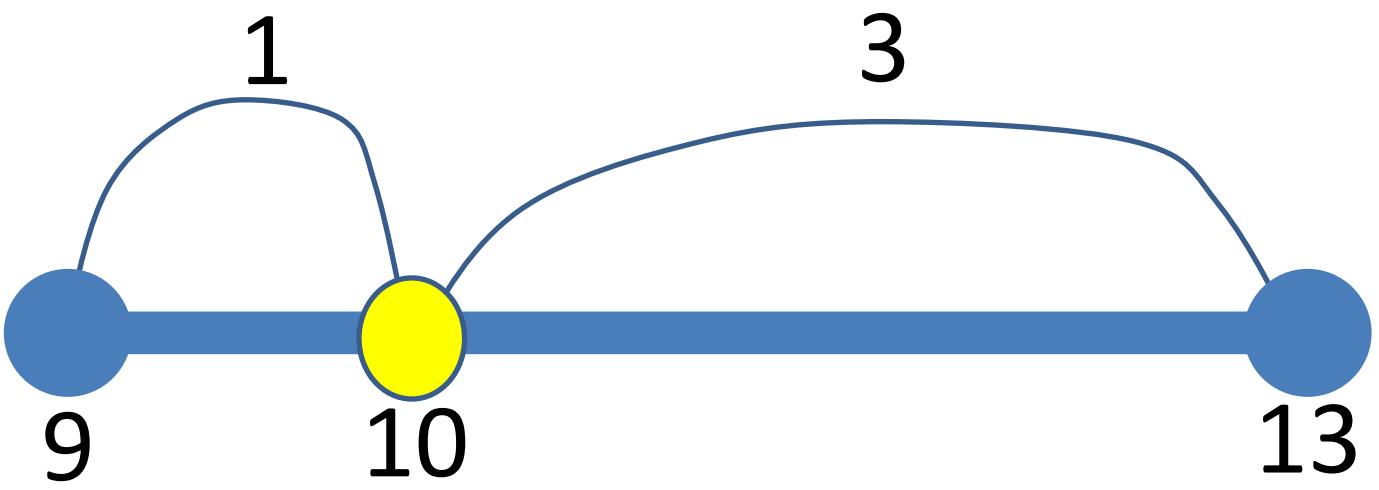
13 - 9





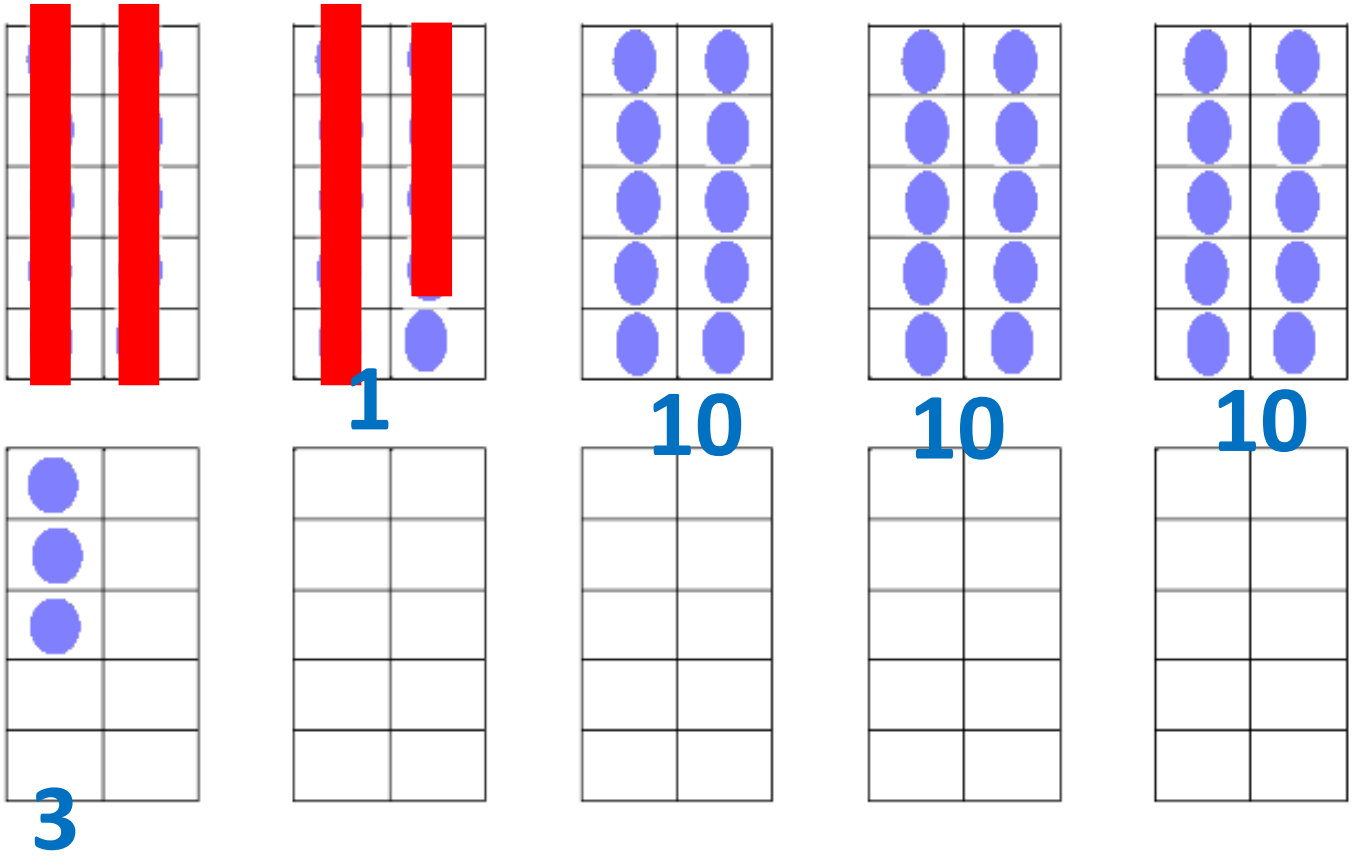
9 + ? = 13

13 - 9 = 4


1
3
9
10
13

Numeracy BluePrints Activities

Subtracting within 100



53 - 19 = 34

100 top

The 100 Square

53 - 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

1

10

10

10

3

The 100 Square

53 - 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

1

10

10

10

3

The 100 Square

53 - 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

1

10

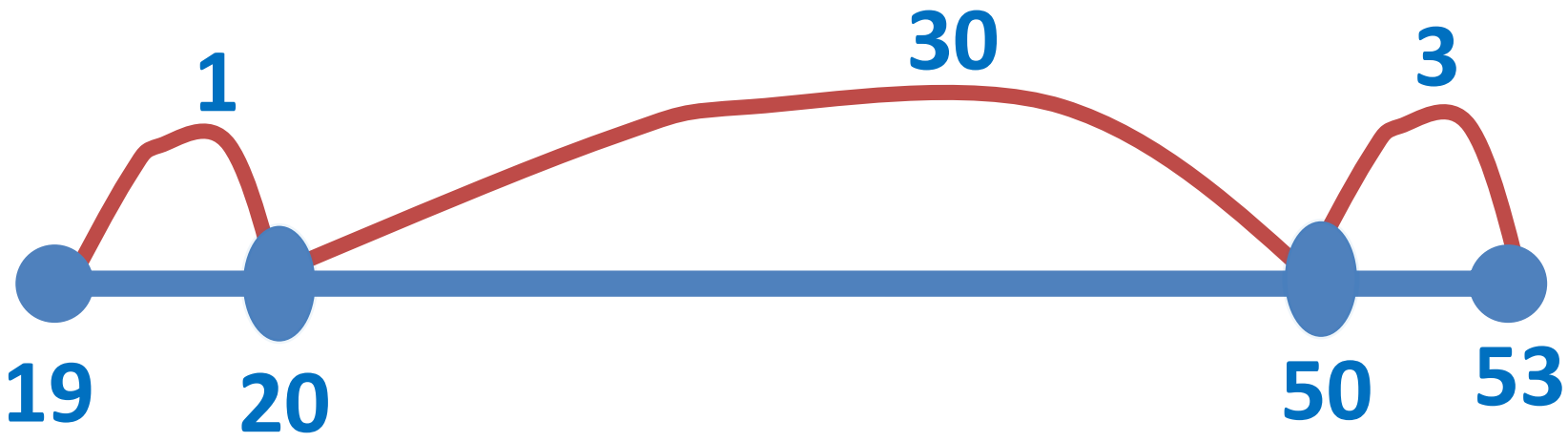
10

10

3

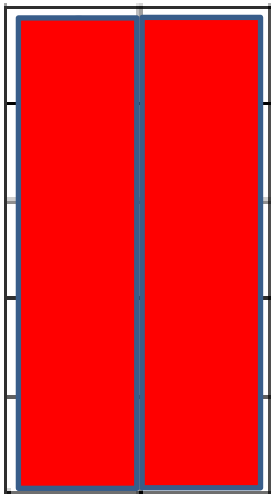
next

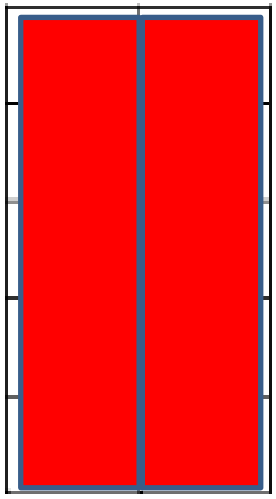
53 - 19 =

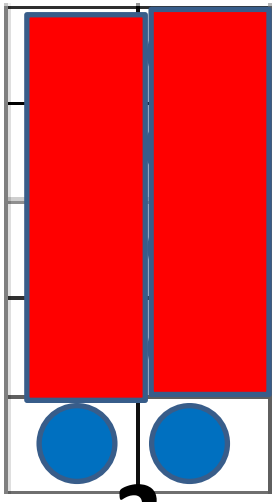


1 + 30 + 3 = 34

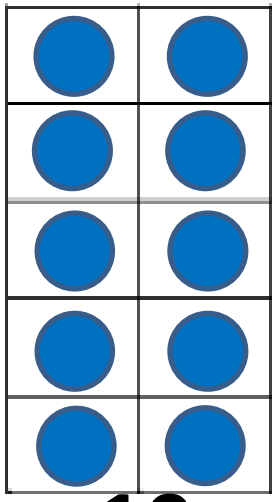
74 – 28 = 46



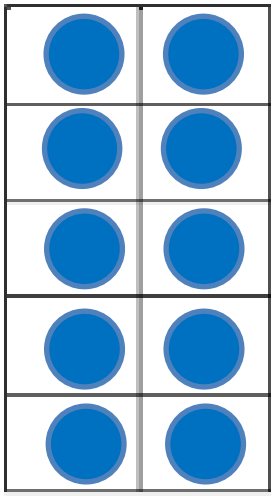




2



10



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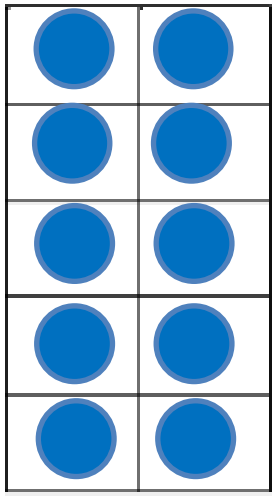
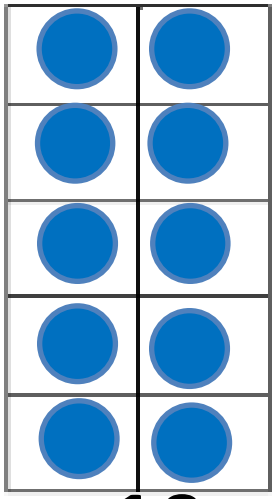


10



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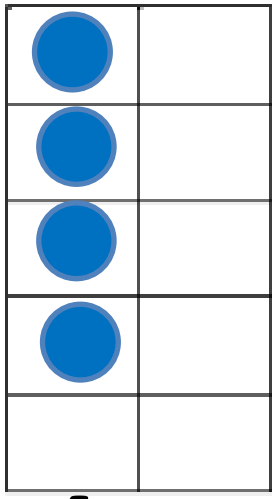


4

The 100 Square

74 - 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

2

10

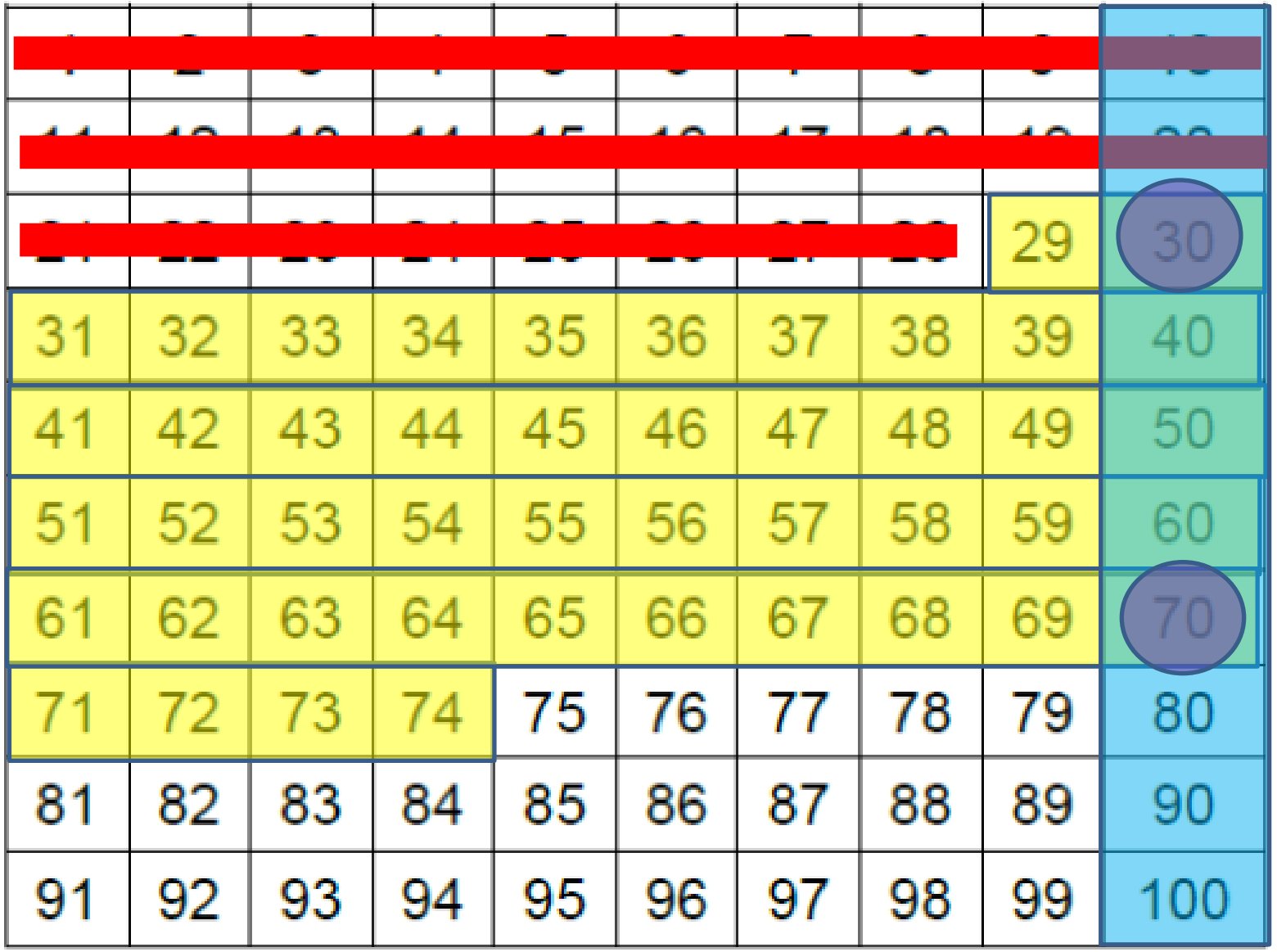
10

10

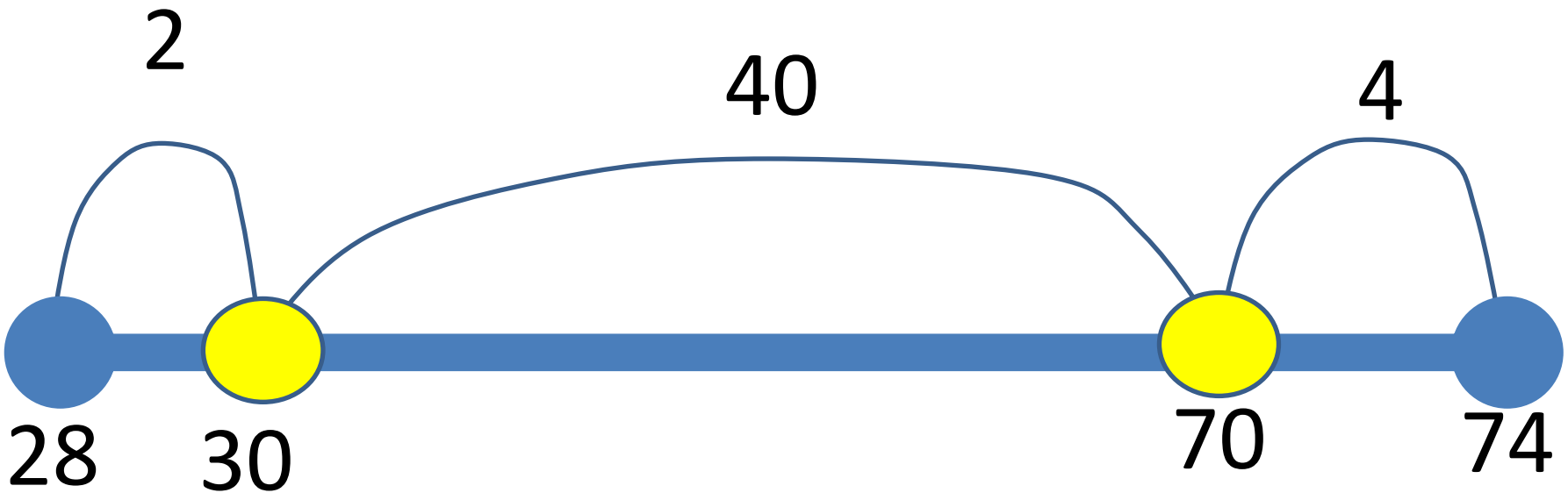
4

The 100 Square

74 - 28 =



74 – 28



$102 - 3$

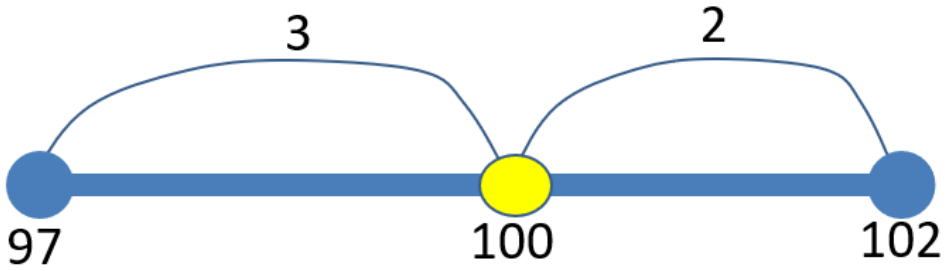
$= 102 - 2 - 1$

$= 100 - 1$

$= 99$

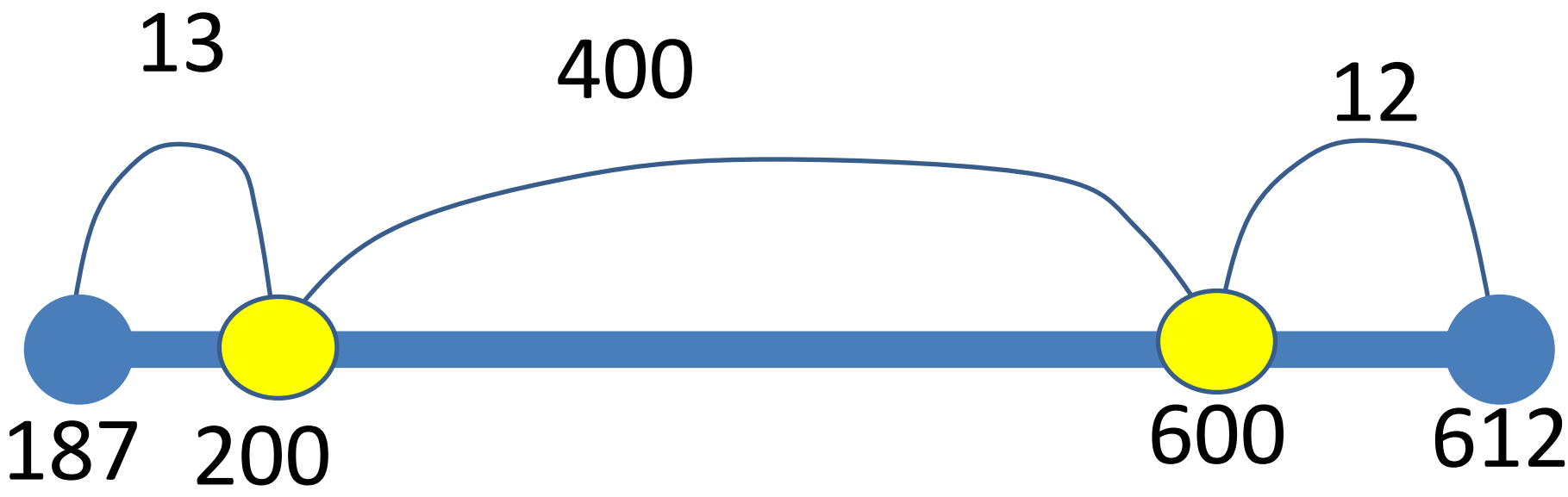
$102 - 97$

$97 + ? = 102$



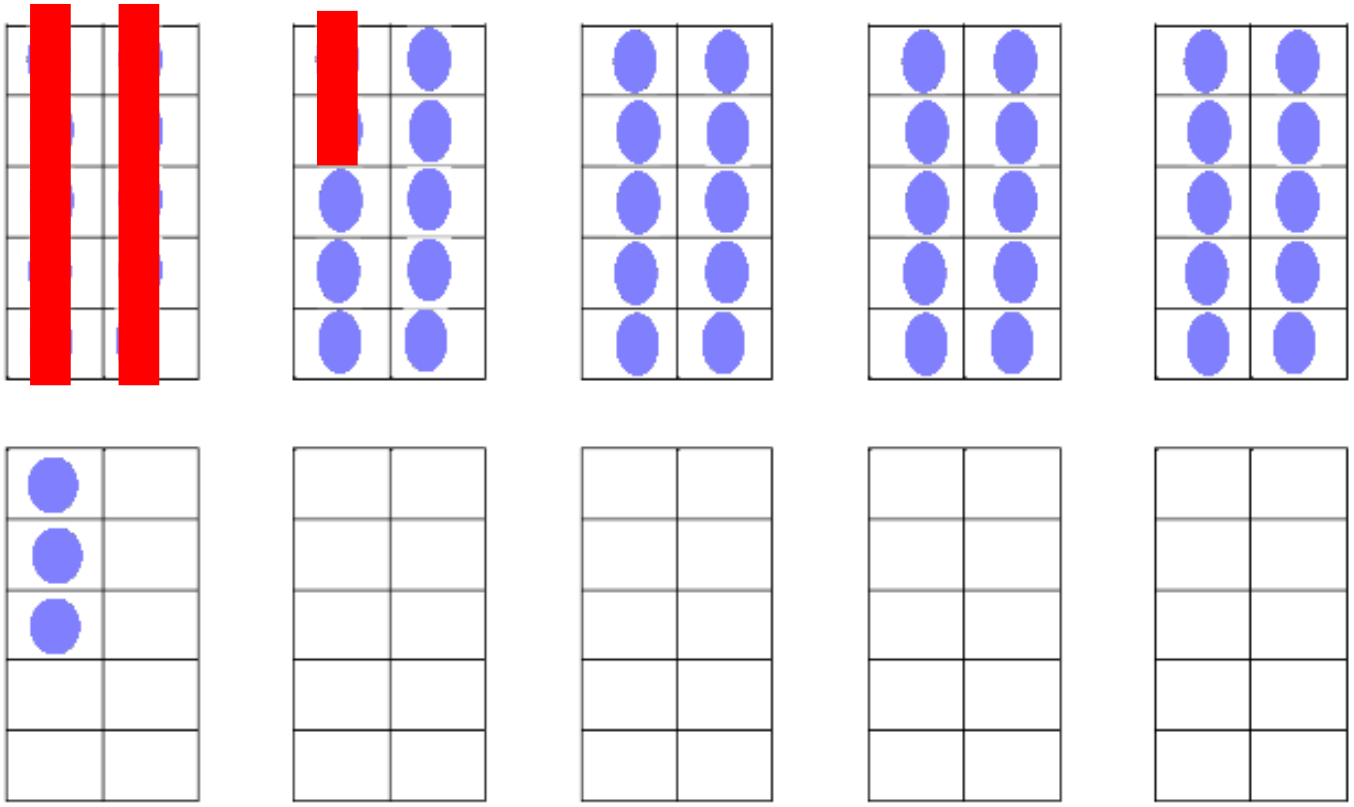
$102 - 97 = 5$

612 - 187



Numeracy BluePrints Activities

Subtracting within 100



53 - 12 = 41

What is the most efficient strategy

45 – 14	Removal by parts – subtract the TENS then subtract the ONES
103 – 89	Count up form 89 to 103 (empty number line)
36 + 21	Place value partitioning – add the TENS and ONES
99 + 16	Make a TOTAL 10 – partition the 16 into 1 + 15

Addition questions

Set A

1) 6 + 3
2) 7 + 4
3) 8 + 5
4) 9 + 4
5) 9 + 7
6) 8 + 6
7) 9 + 6
8) 7 + 5
9) 8 + 7
10) 9 + 8

Set B

1) 15 + 3
2) 13 + 6
3) 14 + 5
4) 18 + 5
5) 19 + 4
6) 19 + 7
7) 18 + 6
8) 19 + 6
9) 17 + 5
10) 18 + 7

Set C

1) 23 + 6
2) 34 + 4
3) 19 + 9
4) 28 + 6
5) 29 + 7
6) 27 + 5
7) 29 + 9
8) 39 + 6
9) 37 + 5
10) 48 + 7

Set D

1) 43 +16
2) 34 + 12
3) 29 + 14
4) 39 + 16
5) 28 + 17
6) 29 + 15
7) 39 + 19
8) 39 + 16
9) 37 + 15
10) 48 + 14

Set E

1) 47 + 32
2) 45 + 22
3) 29 + 24
4) 39 + 36
5) 48 + 27
6) 39 + 26
7) 48 + 19
8) 59 + 26
9) 67 + 25
10) 78 + 24

Set F

1) 147 + 32
2) 245 + 22
3) 329 + 24
4) 439 + 36
5) 148 + 27
6) 239 + 26
7) 248 + 19
8) 659 + 26
9) 167 + 125
10) 578 + 324

Subtraction Questions – Ex 1

Set A

1) 6 - 3
2) 7 - 4
3) 8 - 5
4) 9 - 4
5) 9 - 7
6) 8 - 6
7) 9 - 6
8) 7 - 5
9) 8 - 7
10) 9 - 8

Set B

1) 15 - 3
2) 13 - 6
3) 14 - 5
4) 18 - 5
5) 19 - 4
6) 19 - 7
7) 18 - 6
8) 19 - 6
9) 17 - 5
10) 18 - 7

Set C

1) 23 - 6
2) 34 - 5
3) 19 - 9
4) 28 - 6
5) 29 - 7
6) 27 - 5
7) 26 - 9
8) 39 - 6
9) 37 - 5
10) 48 - 7

Set D

1) 43 - 16
2) 34 - 12
3) 29 - 14
4) 39 - 16
5) 28 - 17
6) 29 - 15
7) 34 - 19
8) 39 - 16
9) 37 - 15
10) 48 - 14

Set E

1) 47 - 32
2) 45 - 22
3) 29 - 24
4) 39 - 36
5) 48 - 27
6) 39 - 26
7) 48 - 19
8) 59 - 26
9) 67 - 25
10) 78 - 24

Set F

1) 147 - 32
2) 245 - 22
3) 329 - 24
4) 439 - 36
5) 148 - 27
6) 239 - 26
7) 248 - 19
8) 659 - 26
9) 167 - 125
10) 578 - 324

Subtraction Questions – Ex 2

Set A

1) 11 – 9
2) 13 – 9
3) 11 – 7
4) 12 – 9
5) 11 – 8
6) 14 – 9
7) 12 – 8
8) 16 – 9
9) 13 – 8
10) 17 – 9

Set B

1) 21 – 19
2) 22 – 18
3) 21 – 17
4) 23 – 19
5) 26 – 19
6) 21 – 18
7) 25 – 19
8) 27 – 19
9) 21 – 15
10) 23 – 16

Set C

1) 21 – 9
2) 22 – 8
3) 21 – 7
4) 23 – 9
5) 26 – 9
6) 21 – 8
7) 25 – 9
8) 27 – 9
9) 21 – 5
10) 23 – 6

Set D

1) 31 – 19
2) 32 – 18
3) 31 – 17
4) 33 – 19
5) 36 – 19
6) 31 – 18
7) 35 – 19
8) 37 – 19
9) 31 – 15
10) 33 – 16

Set E

1) 51 – 19
2) 62 – 18
3) 71 – 17
4) 63 – 29
5) 56 – 39
6) 71 – 28
7) 95 – 59
8) 83 – 49
9) 92 – 57
10) 83 – 39

Set F

1) 103 – 87
2) 105 – 58
3) 123 – 99
4) 107 – 98
5) 113 – 99
6) 203 – 198
7) 204 – 199
8) 304 – 98
9) 506 – 99
10) 802 – 497

the National Parent Forum of Scotland

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Thank You!

To help us continue to represent parents views, understand yours and your child's experiences of maths and numeracy, and to continue to improve the delivery of these sessions, we would appreciate your feedback.

https://www.surveymonkey.co.uk/r/learningtogetherfeedback

With support from Education Scotland and Scottish Government, building on themes emerging from the 'Making Maths Count' Group report

Education Scotland Foghlam Alba

MAKING MATHS COUNT

Scottish Government Riaghaltas na h-Alba gov.scot

Extra examples and questions to try

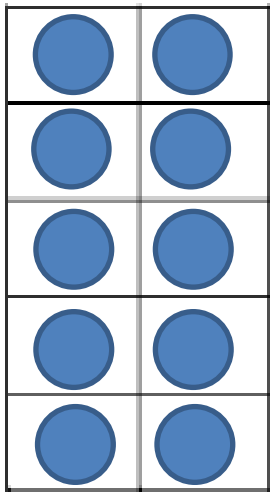
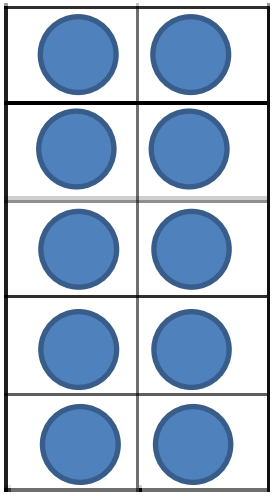
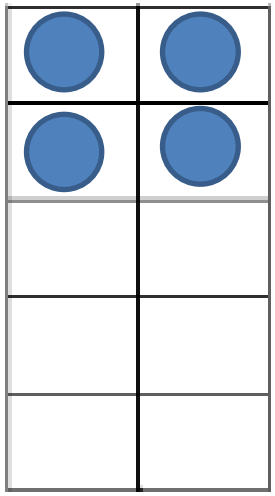
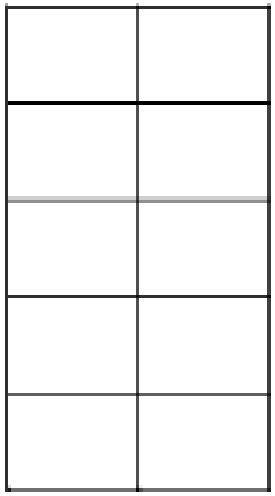
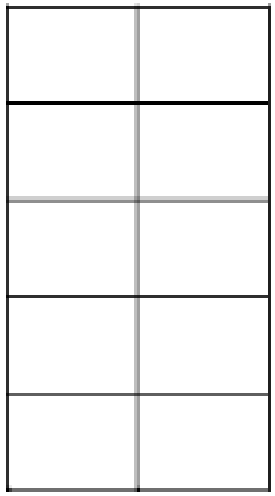
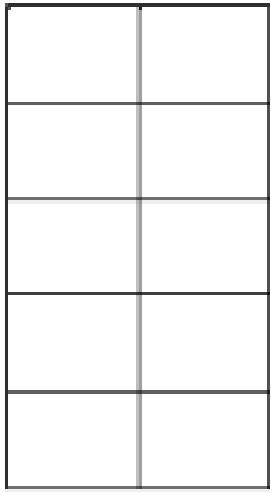
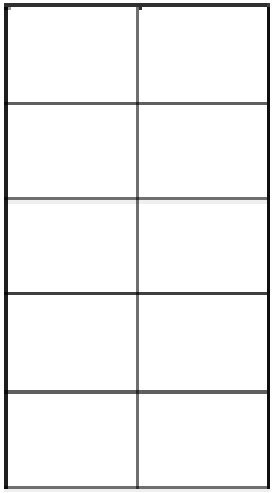
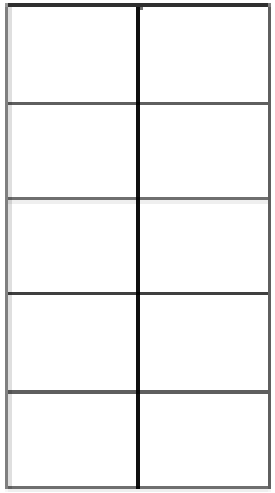
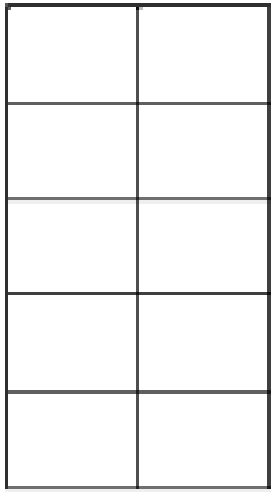
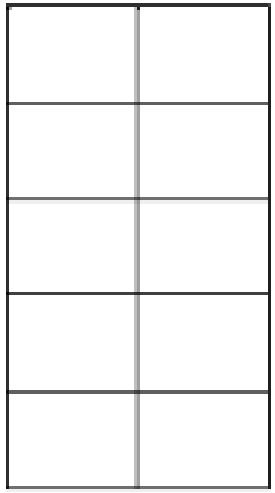
Subitizing
Addition
Subtraction

count on us

inspire.innovate.educate

Subitizing

Subitize

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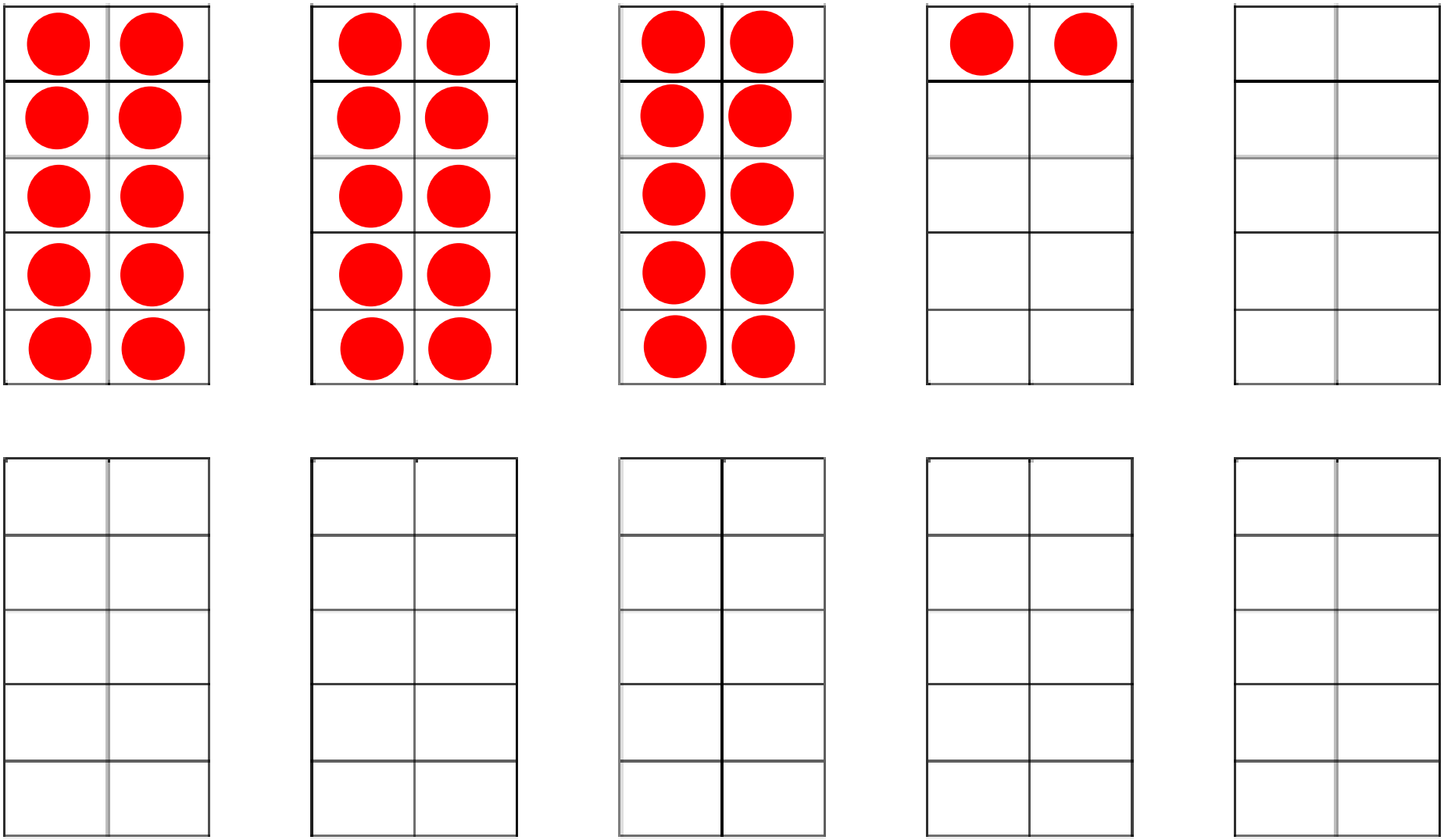

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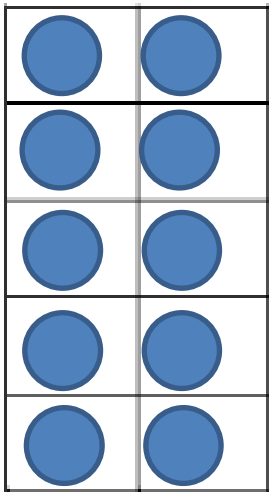
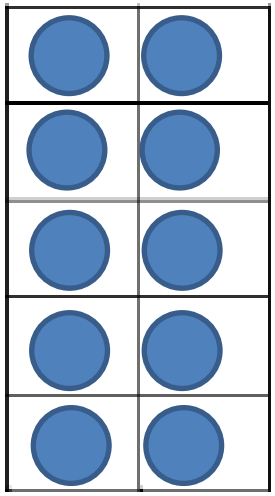
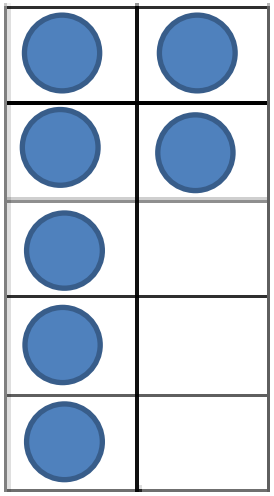
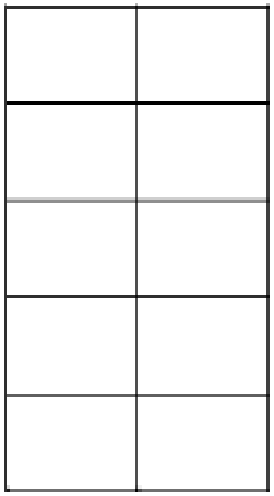
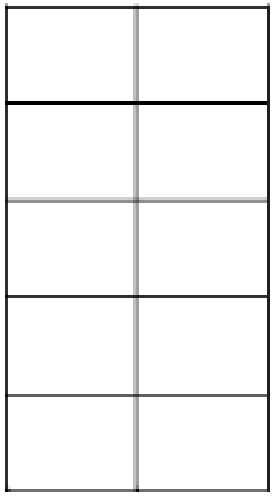
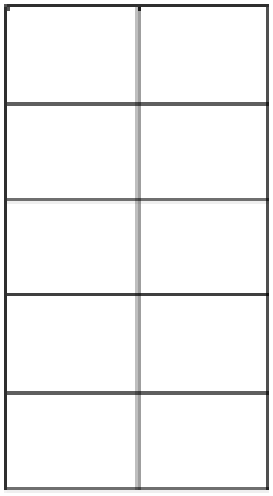
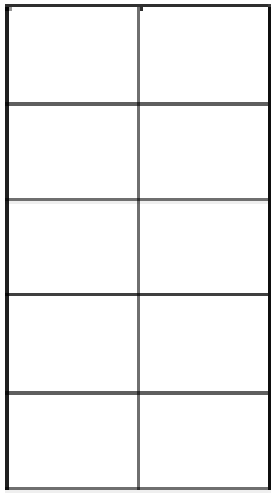
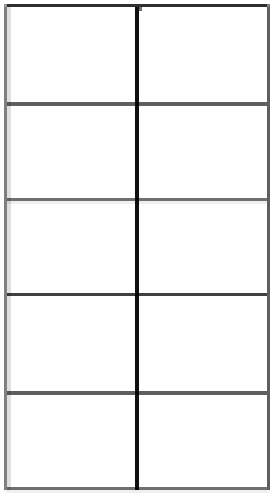
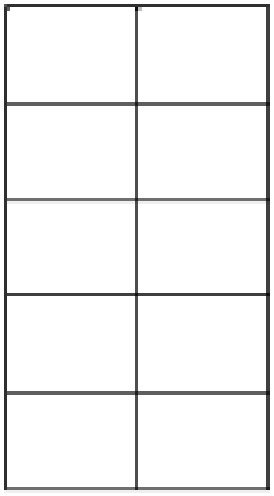
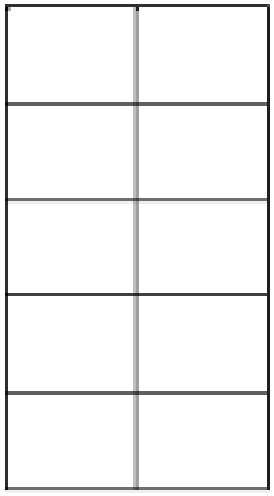

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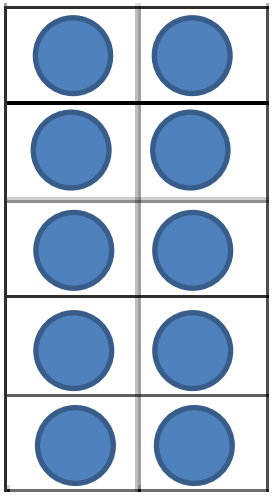
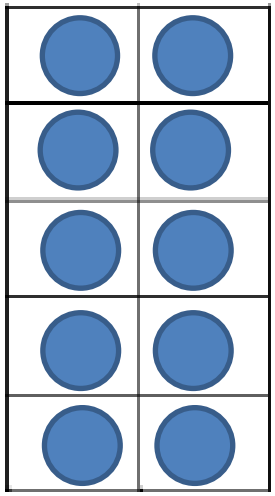
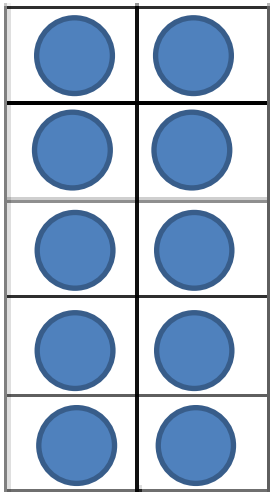
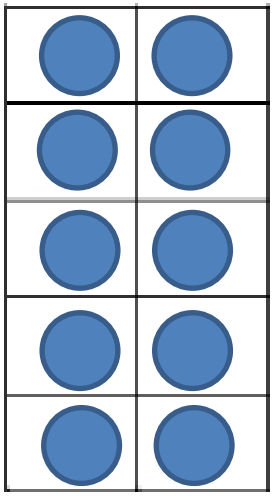
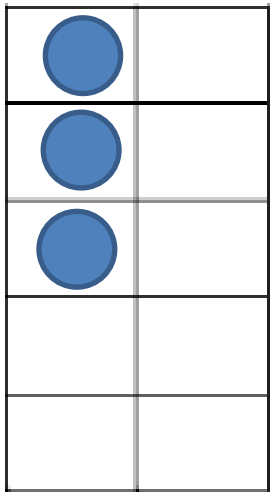

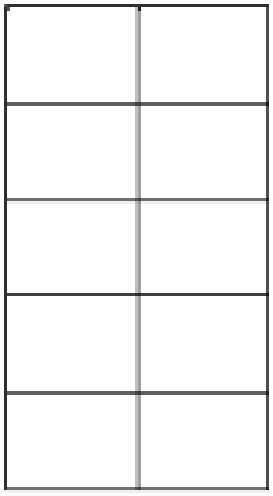
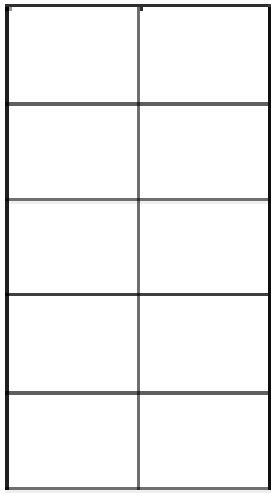
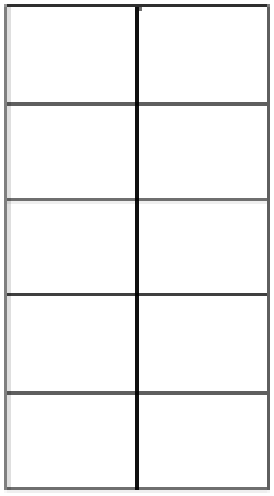
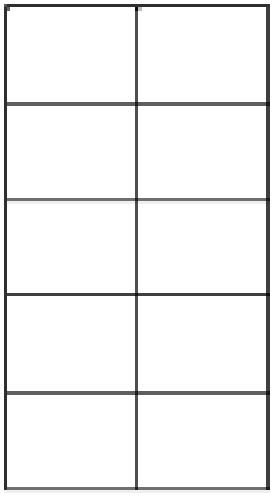
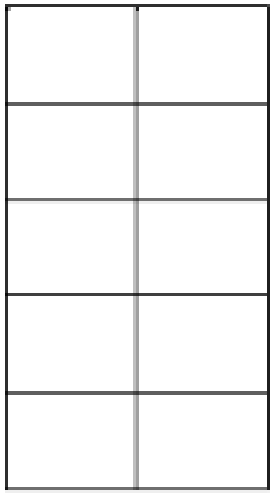

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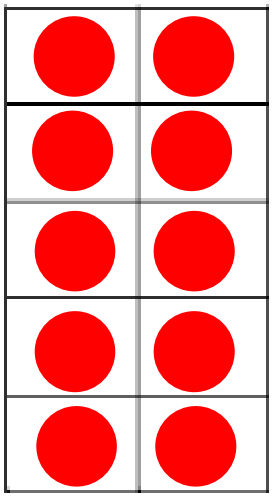
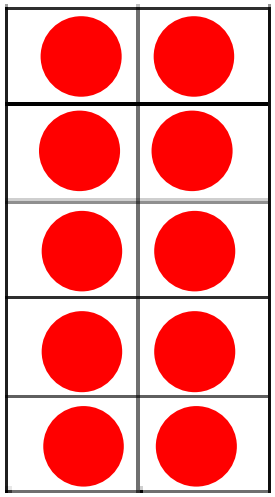
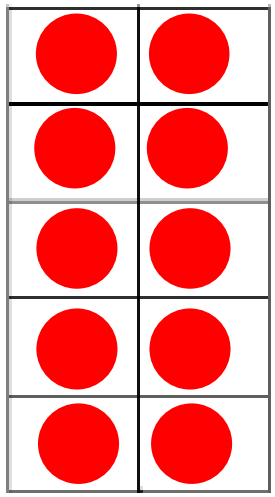
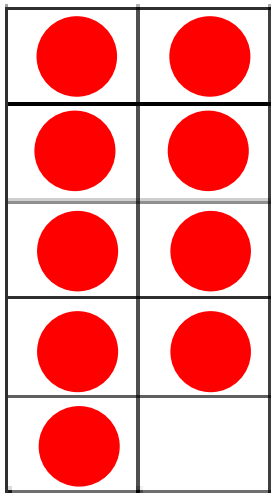
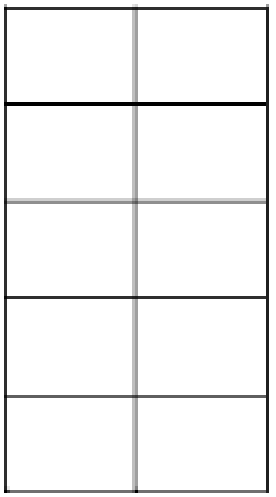
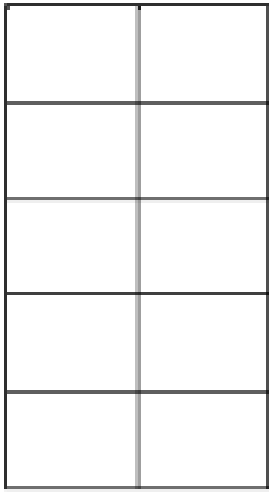
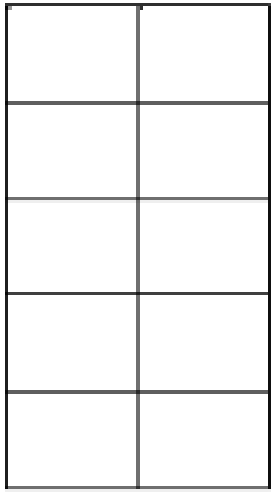
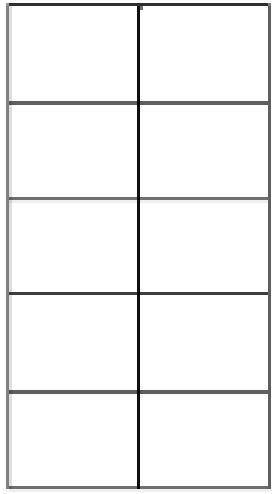
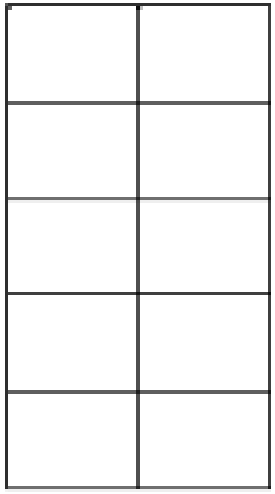
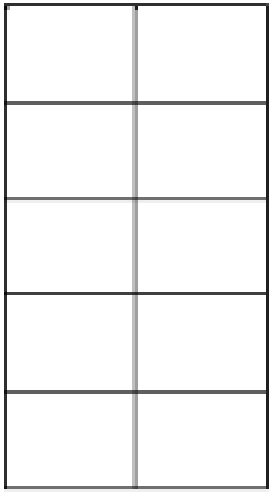

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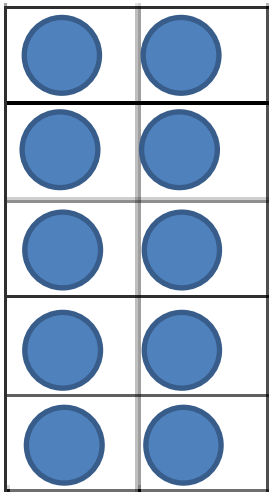
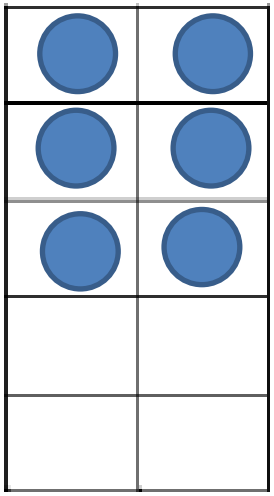
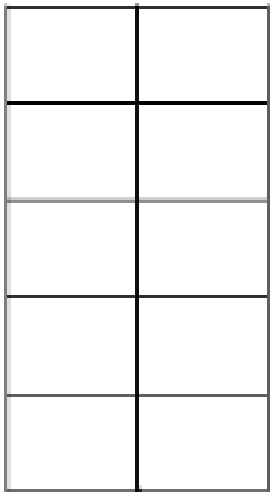
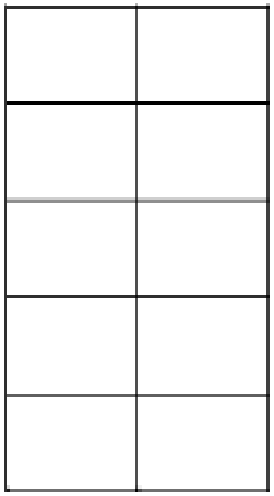
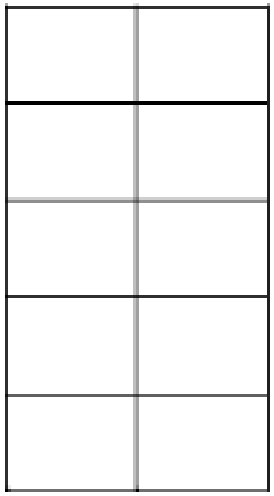
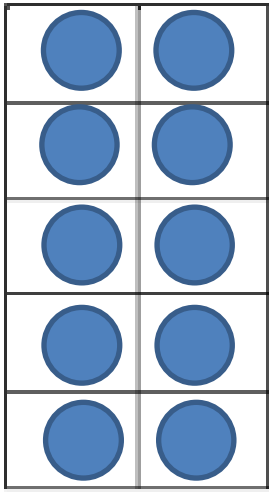
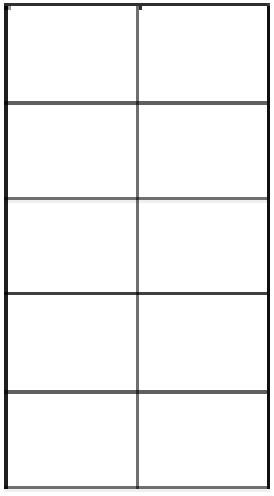
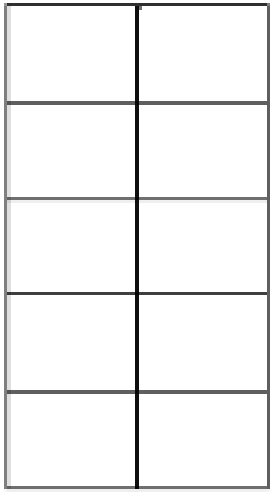
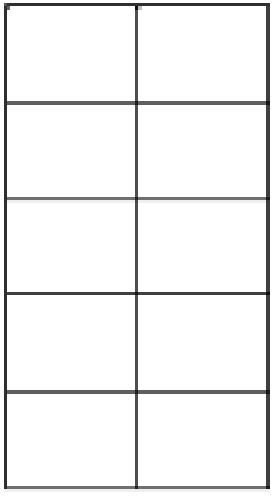
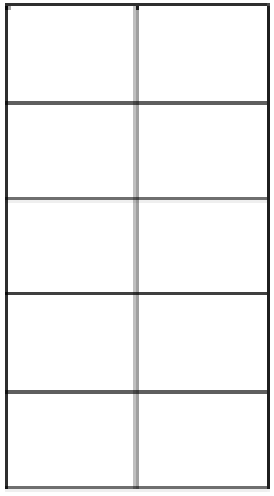
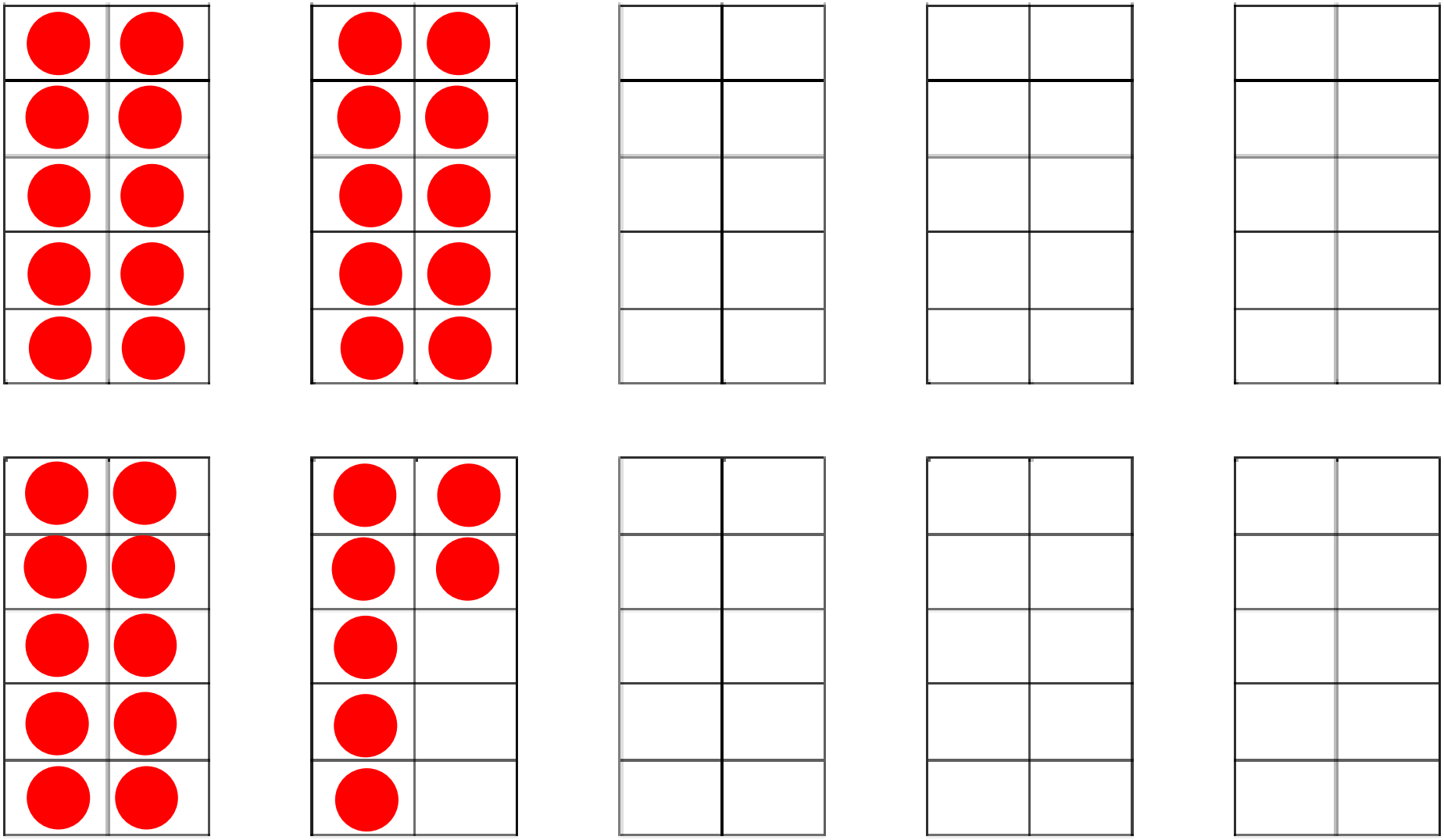











Subitize

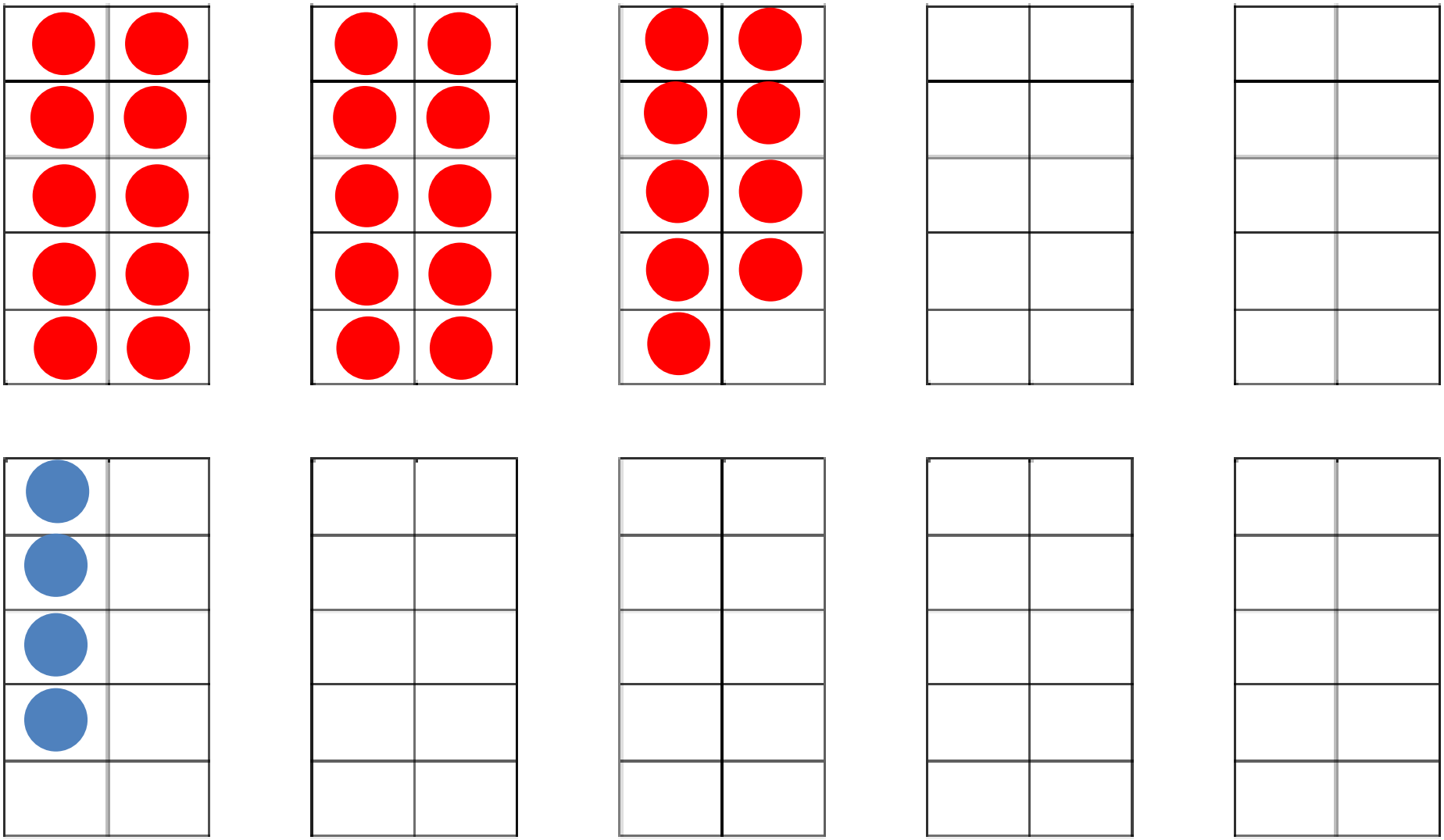


count on us

inspire.innovate.educate

Addition

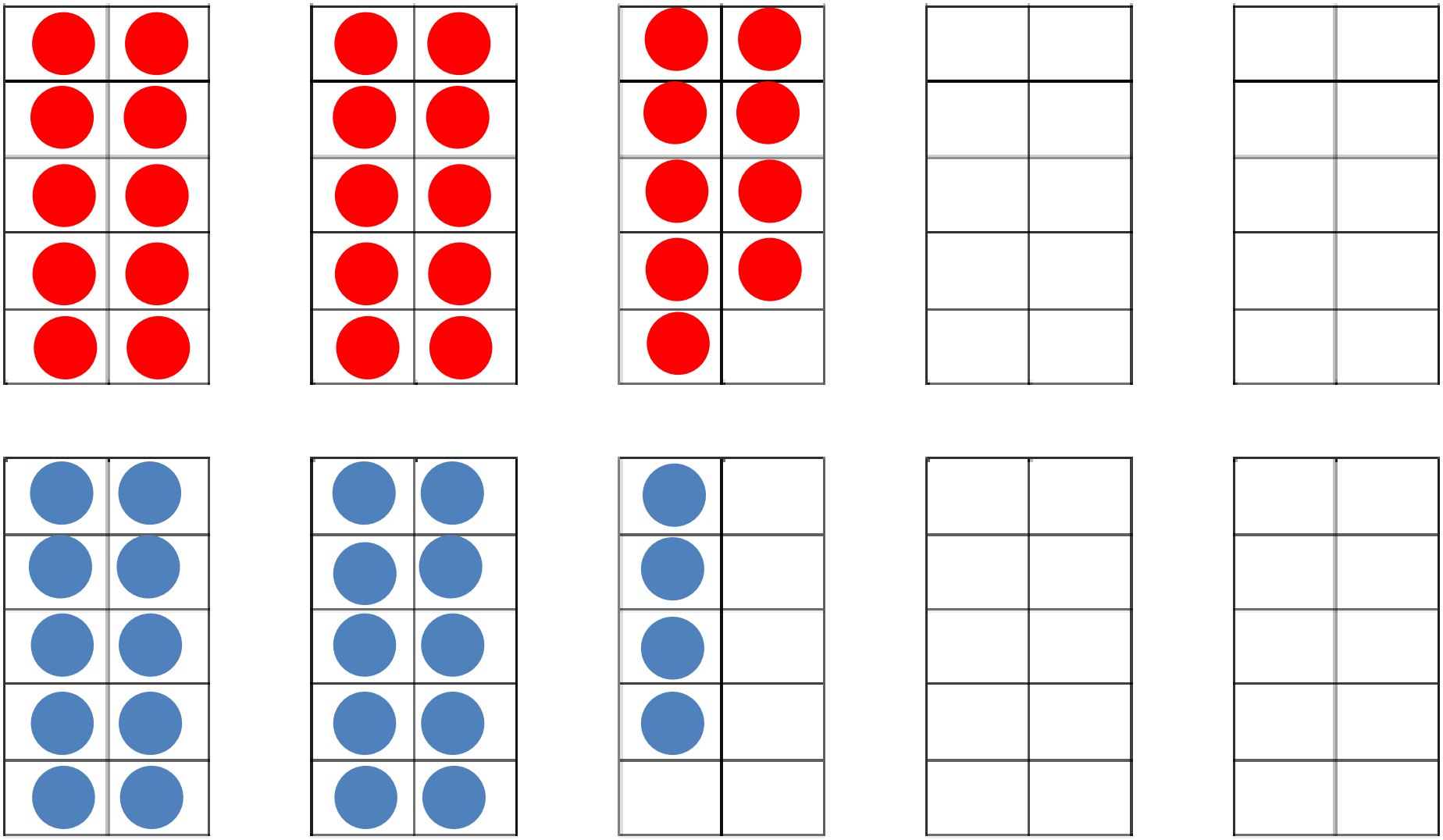
29 + 4



29 + 1 + 3 = 33

count on us
inspire.innovate.educate

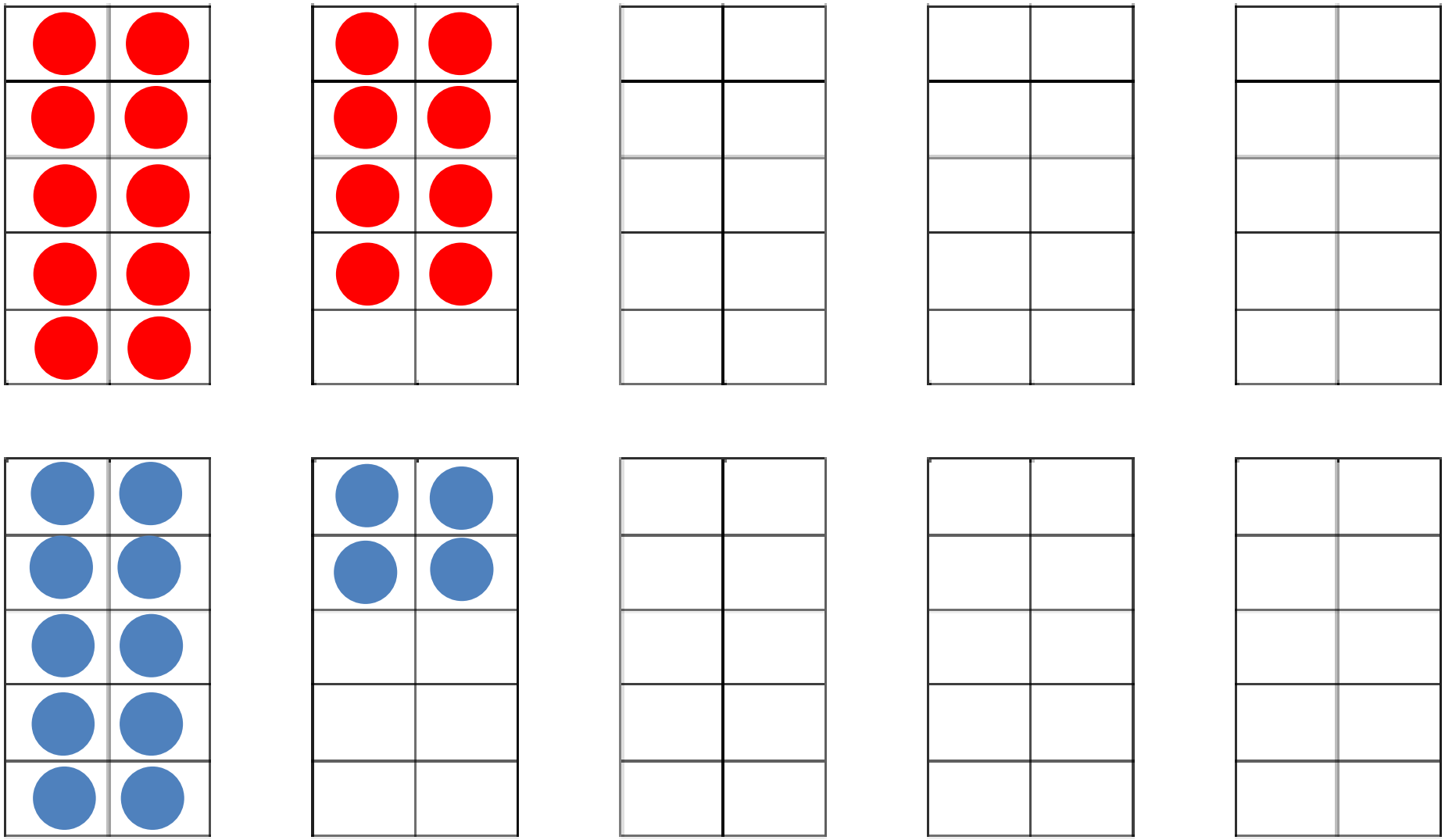
29 + 24



29 + 1 + 23 = 53

count on us
inspire.innovate.educate

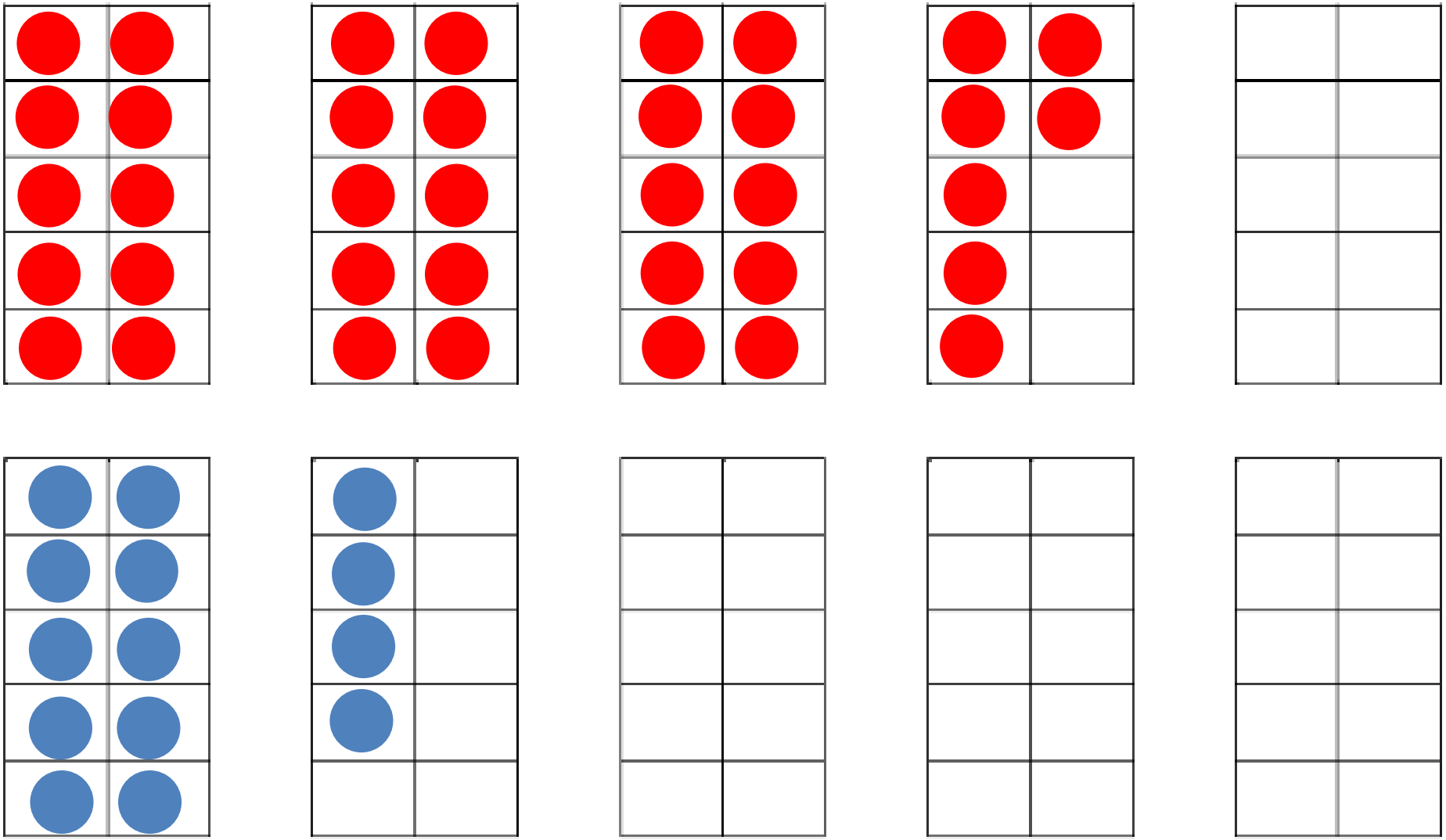
18 + 14



18 + 2 + 12 = 32

count on us
inspire.innovate.educate

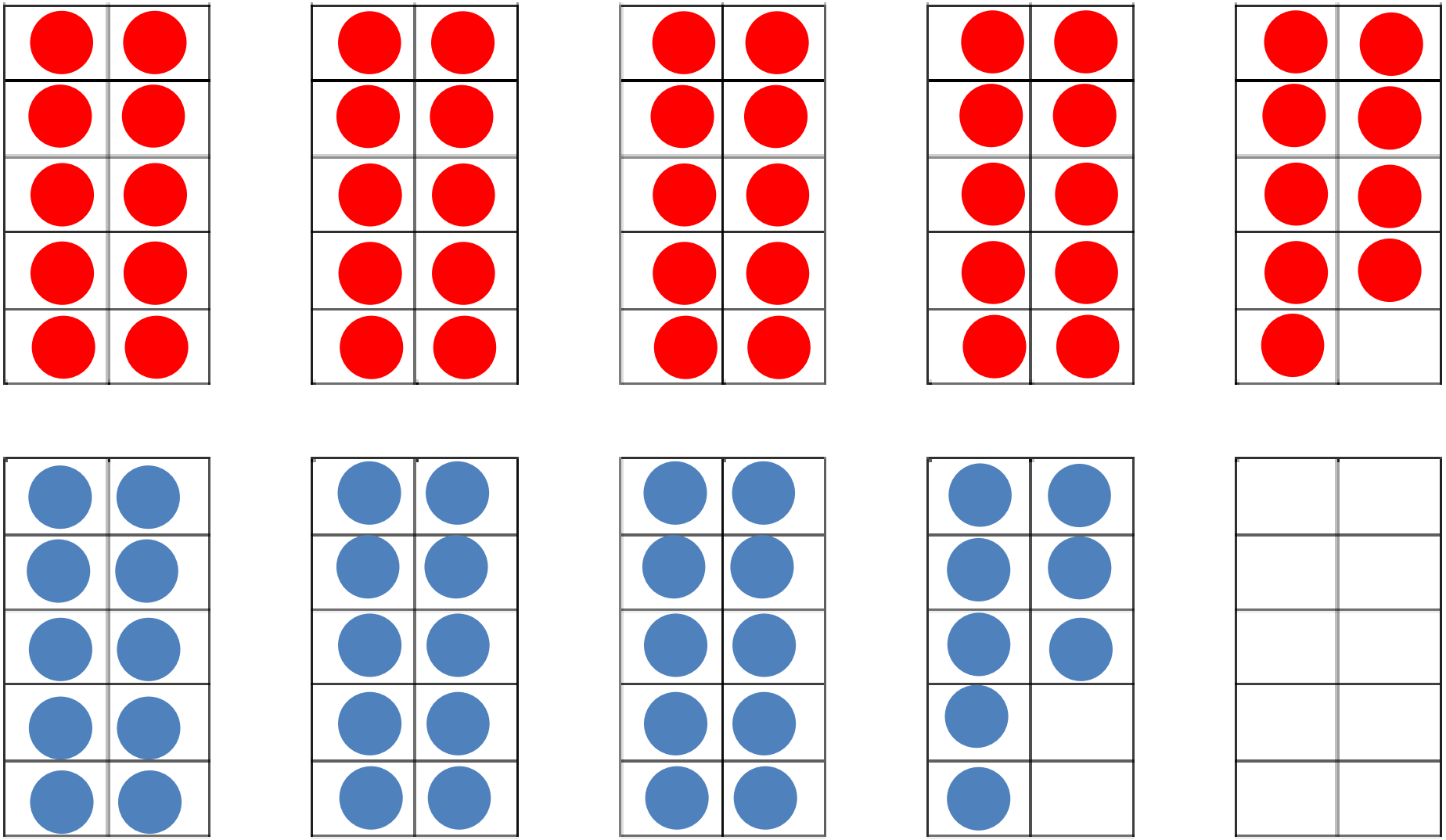
37 + 14



37 + 3 + 11 = 51

count on us
inspire.innovate.educate

49 + 38



49 + 1 + 37 = 87

count on us
inspire.innovate.educate

count on us

inspire.innovate.educate

Subtraction