the National Parent Forum of Scotland

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Learning Together

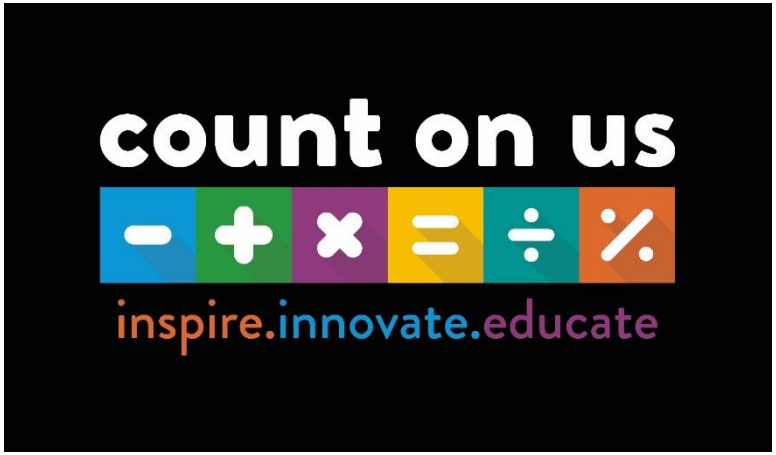
Online Numeracy and Mathematics sessions for parents to support Learning at Home

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 1

Friday 5th June 10:00

Early Number Development

#npfsmaths

Twitter : @CountOnUsEd

Learning Together Session 1
Early Number Development:

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- Subitising
- Part part whole relationships
- Recognise, identify and order numerals
- Assigning quantities to number and number name
- Number sequences
- Partitioning within 5 then 10
- Halves and doubles
- Odd and Even numbers

This session will set the scene for the series of the 8 sessions!

What will these sessions involve

- FUN
- Ah I see moments

The mission

- Inspire everyone to enjoy maths more and understand maths better

Why ‘Count On Us’

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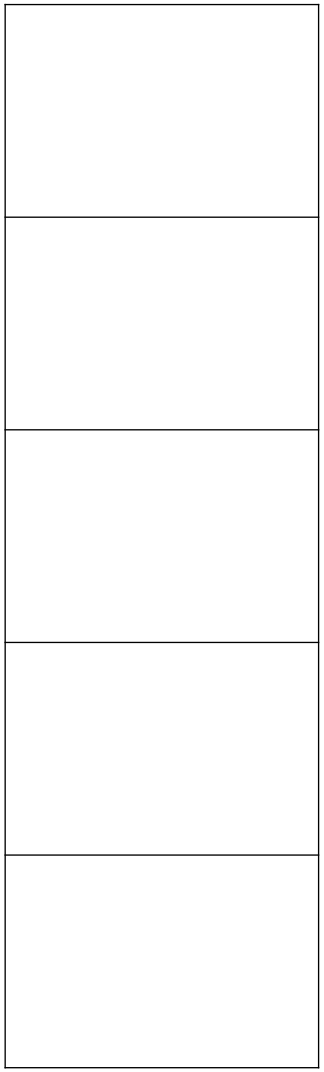
- Links with 25 out of the 32 local authorities in Scotland in last 2 years
- Worked with over 300 schools
- There are over 17, 000 Numeracy BluePrints boards being used in Scottish schools



This is a 5 Frame.

I like 5 frames.

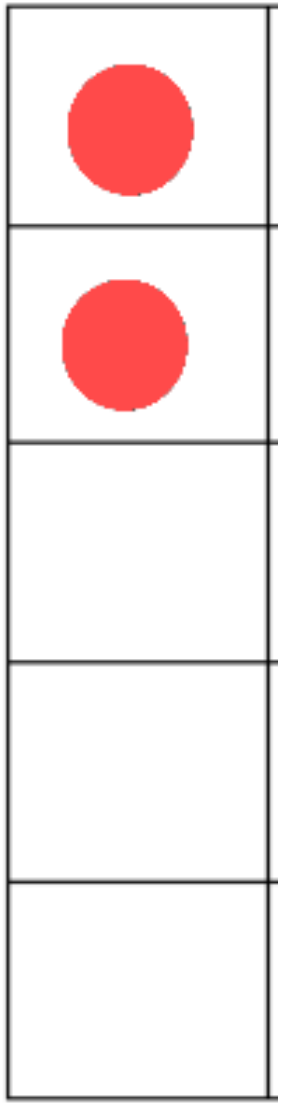
I like making 5.

I like using 5 as a reference point.

Subitizing

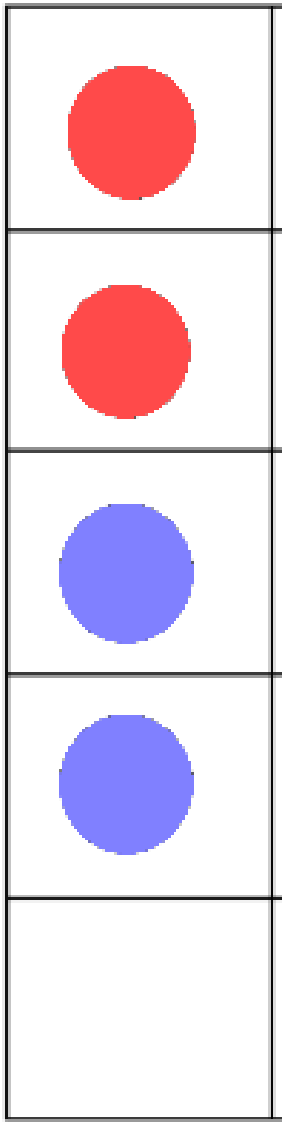
The ability to recognize the number of objects without the need for one to one counting

Subitize



How many dots do you see?

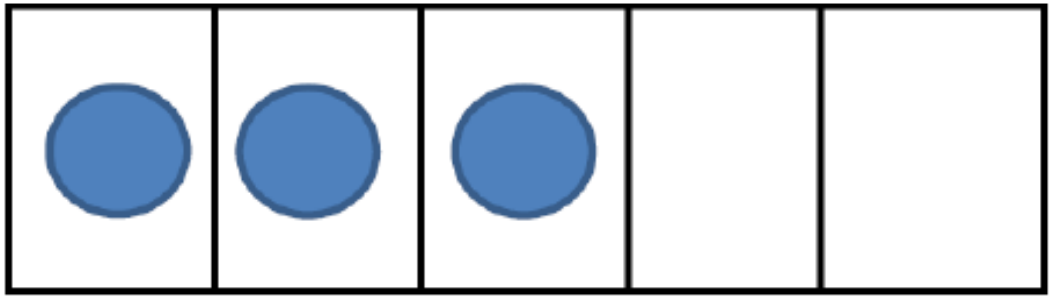
Subitize



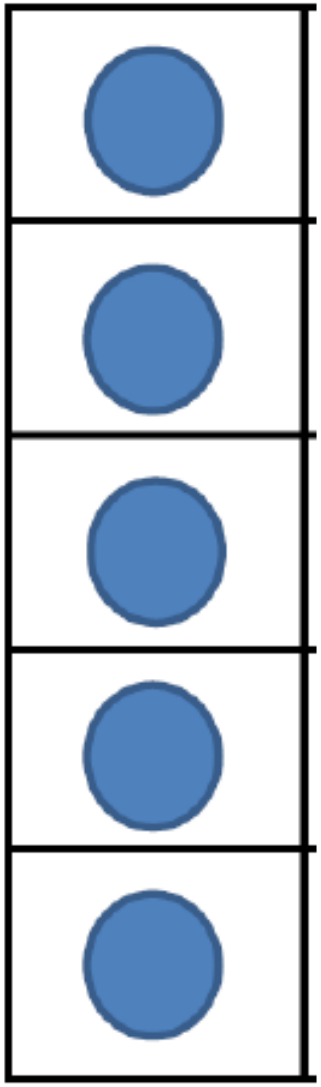
How many dots do you see?

Subitize

How many dots do you see?



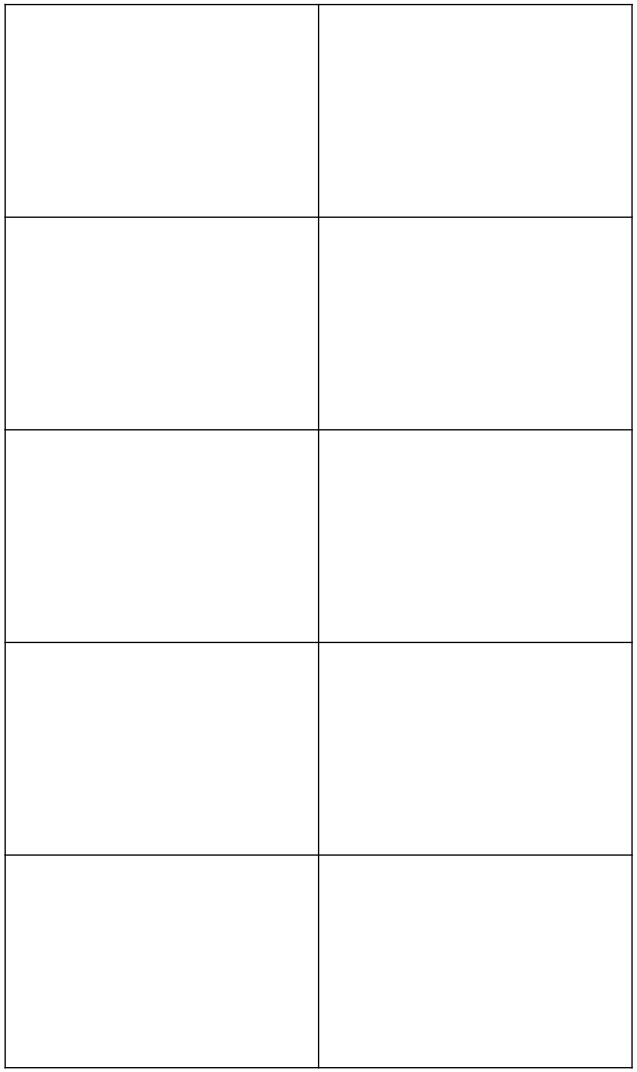
How do you see it?



How many dots do you see?

This is called a

FAST 5



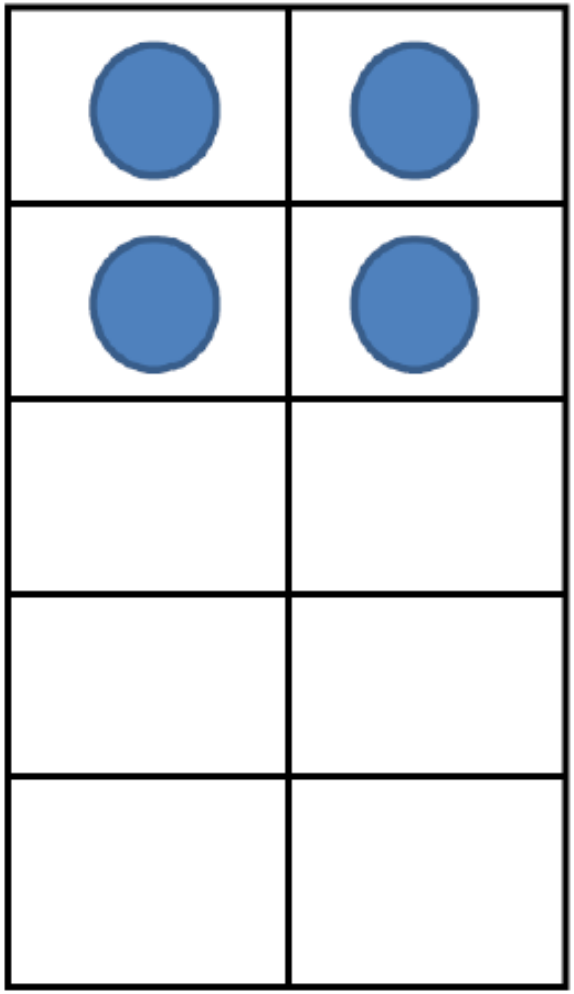
This is a 10 Frame

I like 10 frames.

I like making 10.

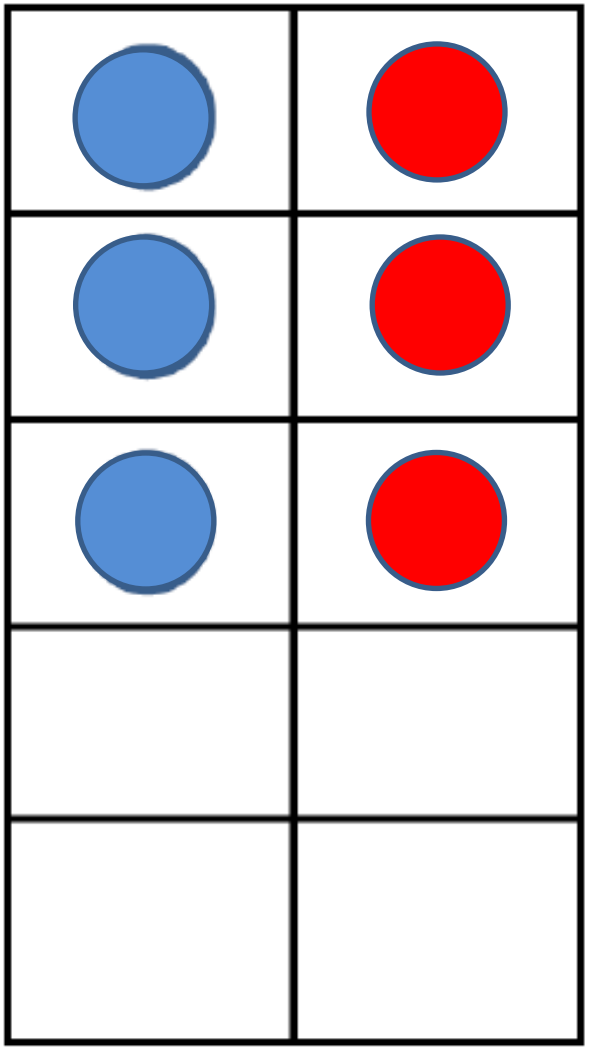
I like using 10 as a reference point.

Subitize



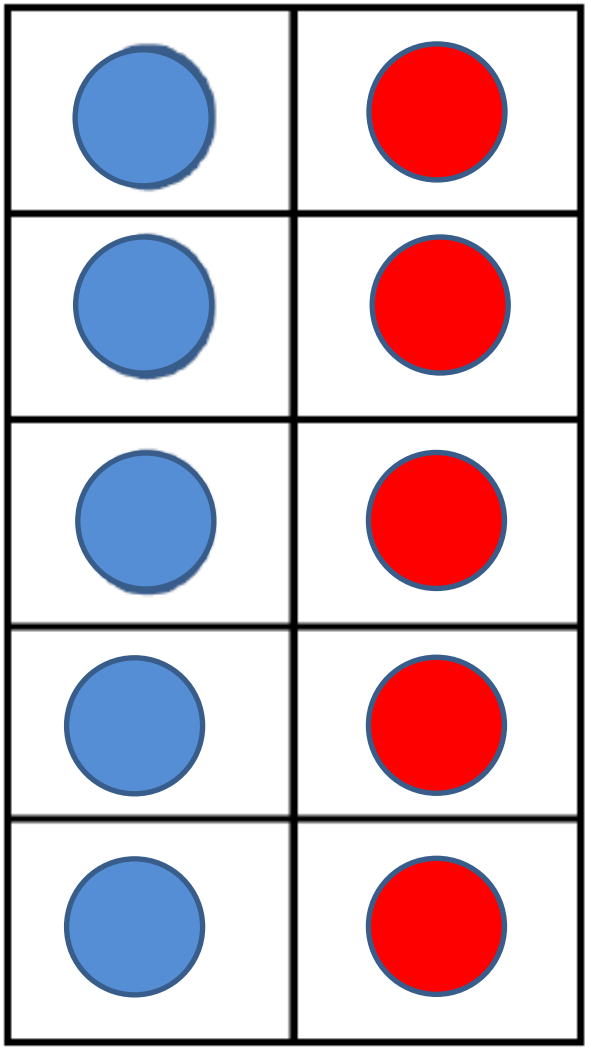
How many dots do you see?

Subitize



How many dots do you see?

Subitize

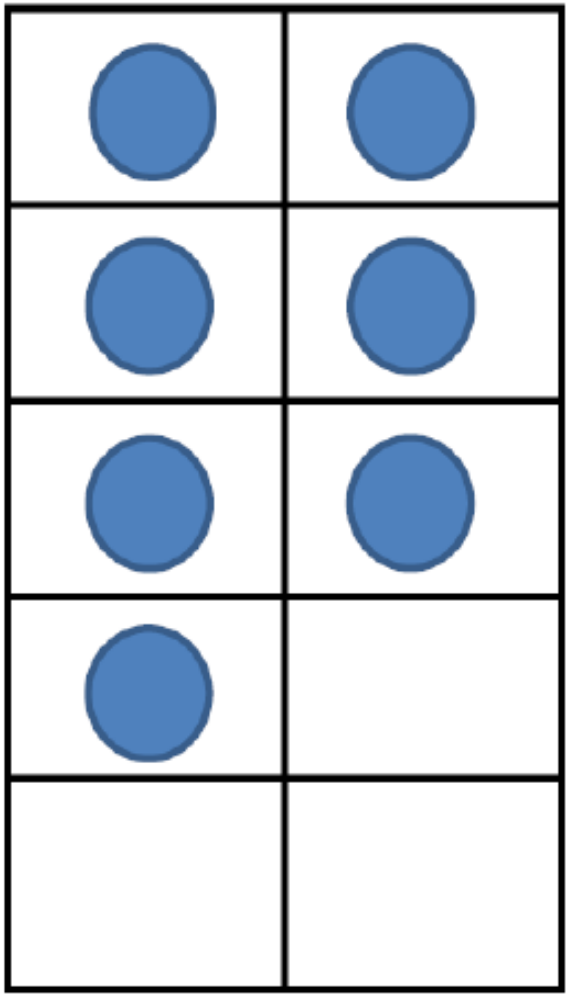


How many dots do you see?

This is called a

TOTAL 10

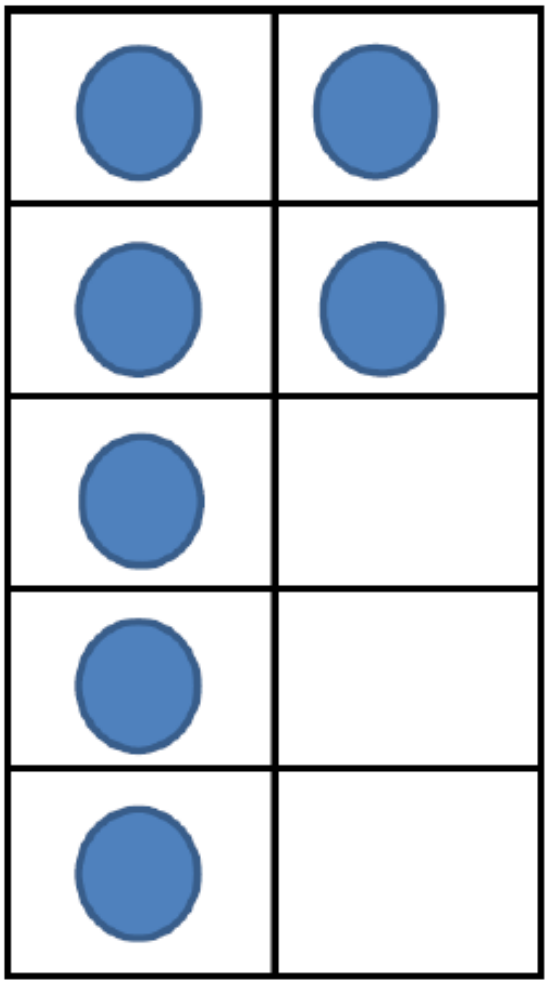
Subitize



How many dots do you see?

How do you see it?

Subitize



How many dots do you see?

How do you see it?

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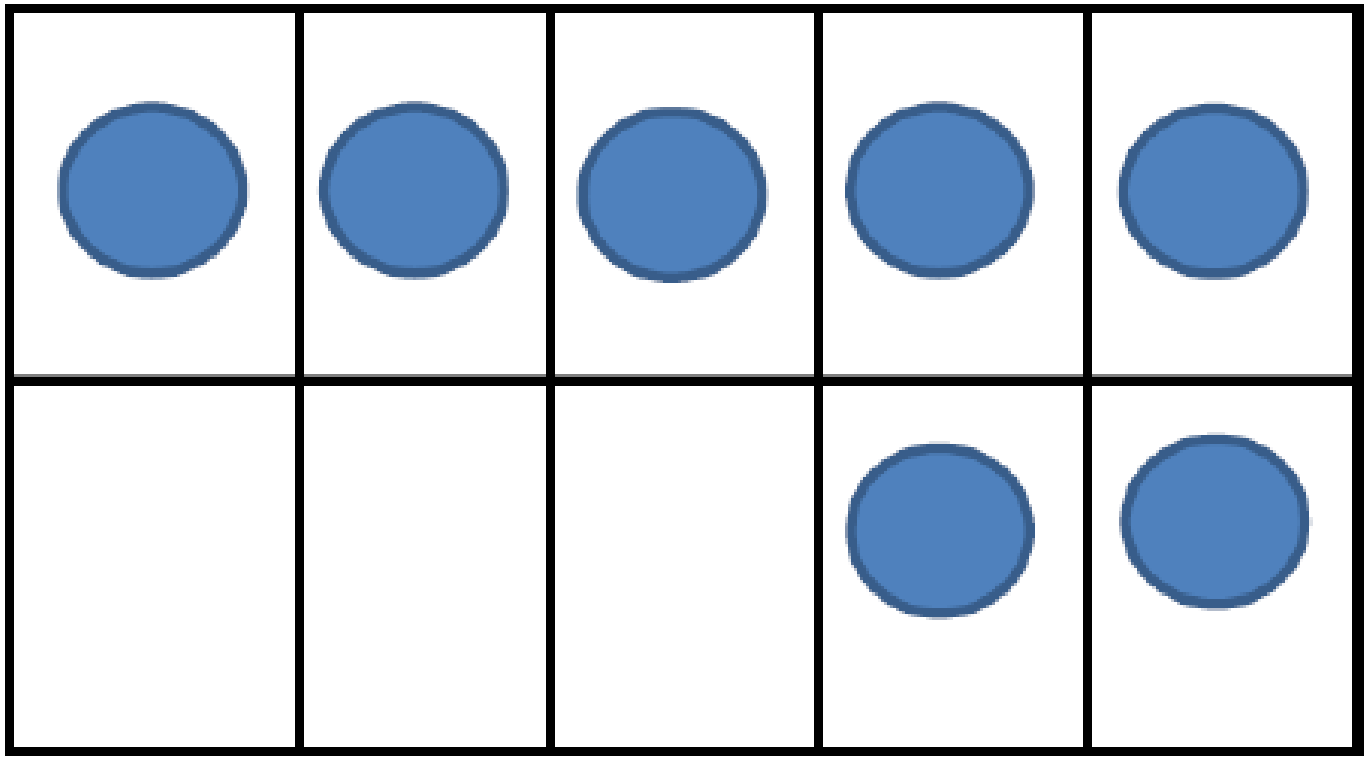

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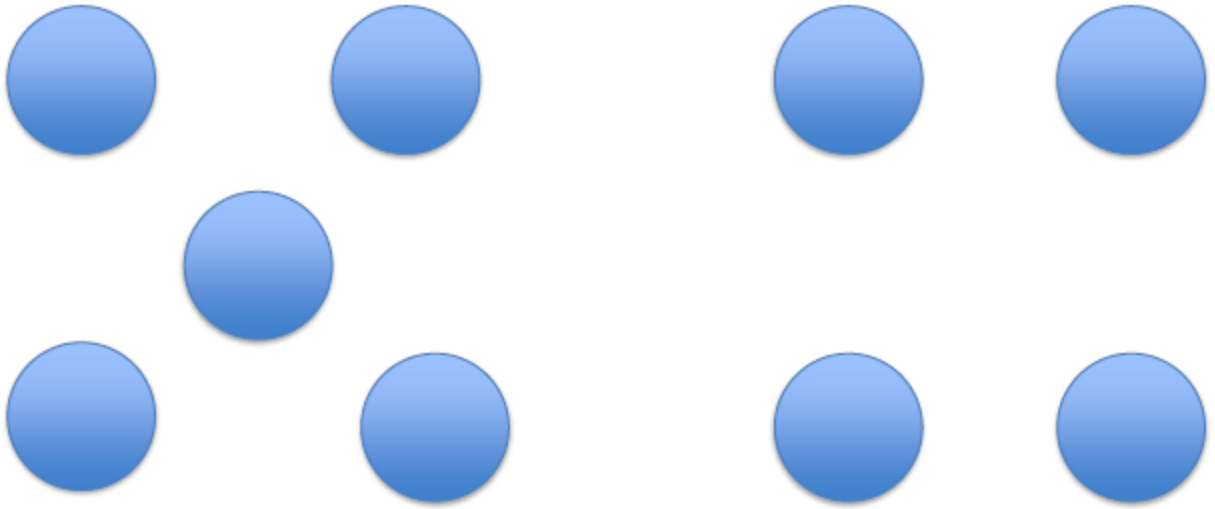

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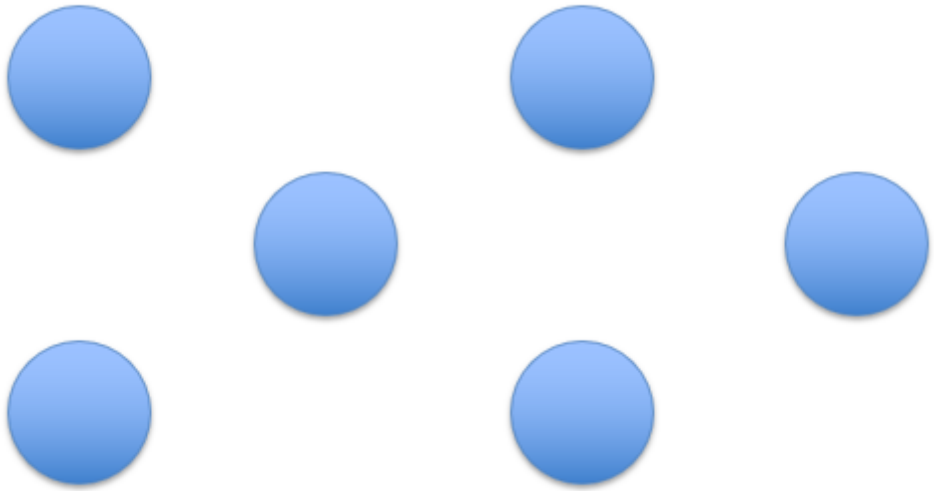

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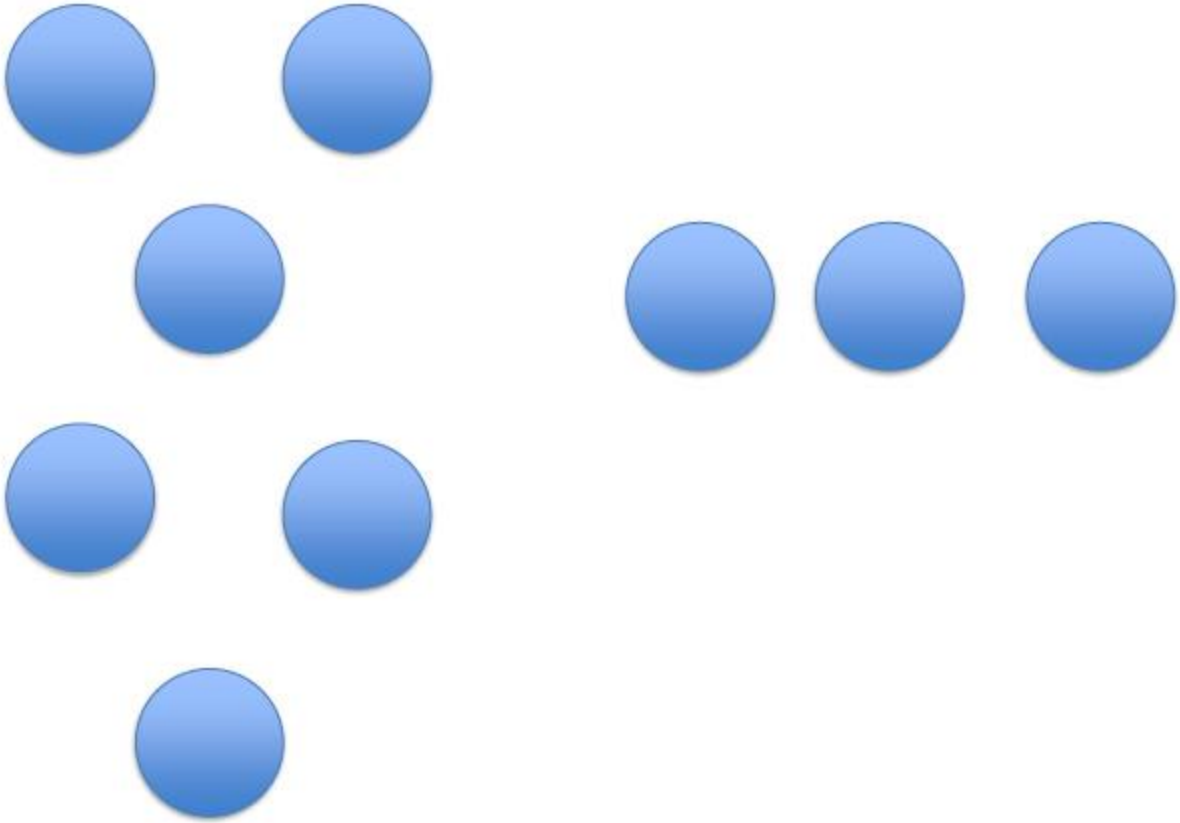

How do you see it?

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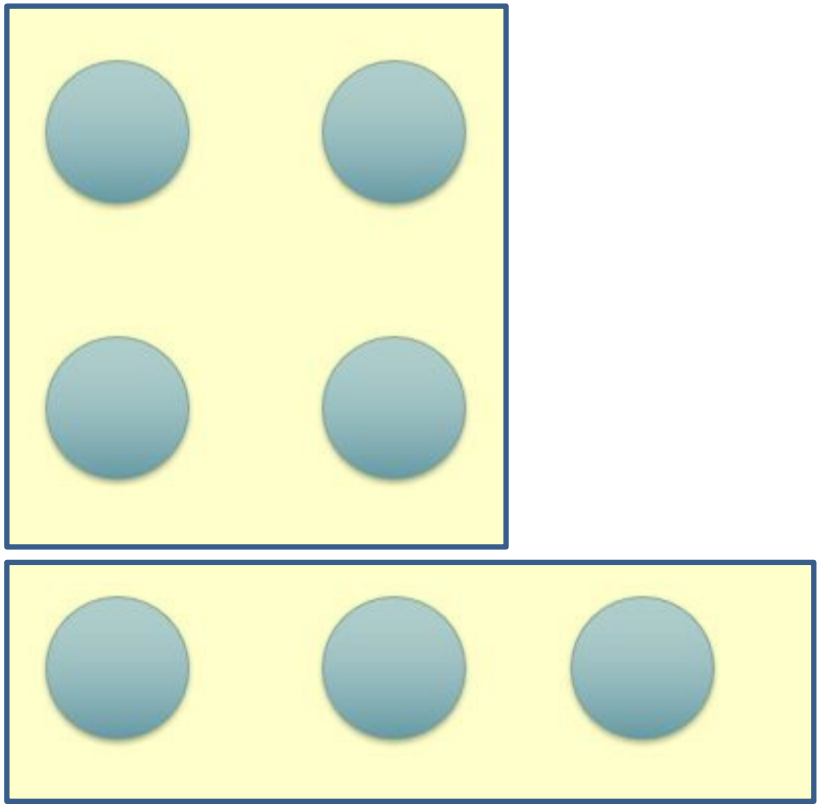
How many dots do you see?



Subitizing

The ability to recognize the number of objects without the need for one to one counting

Part Part Whole Relationship

Looking at how numbers can be formed.

Exploring the relationship between the whole number and its component parts.

Make connections and links with addition and subtraction.

Draw 8 dots in the 10 frame

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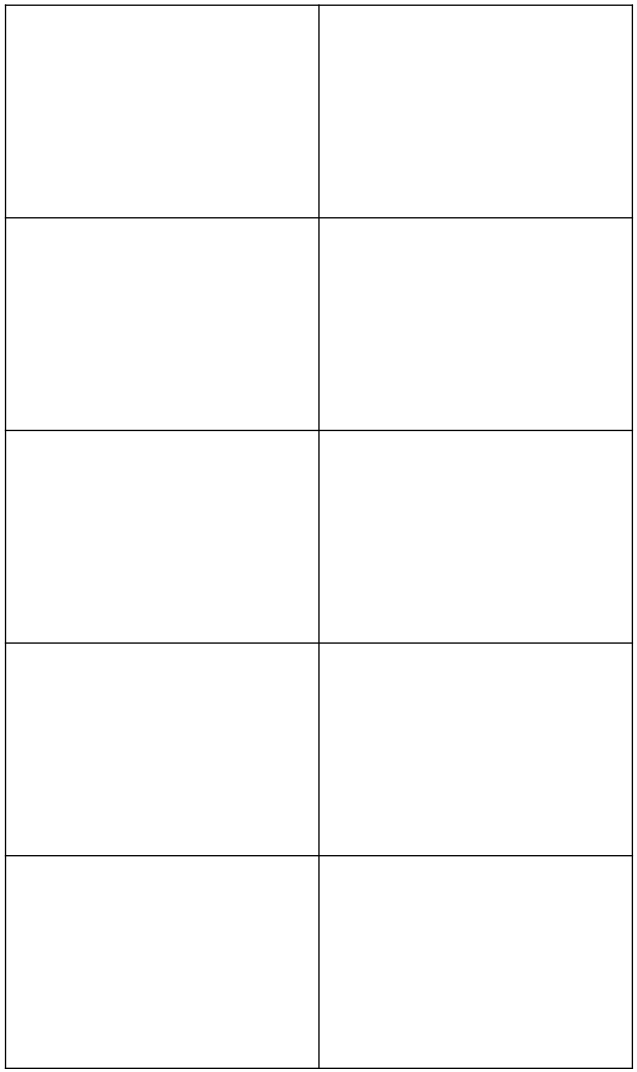

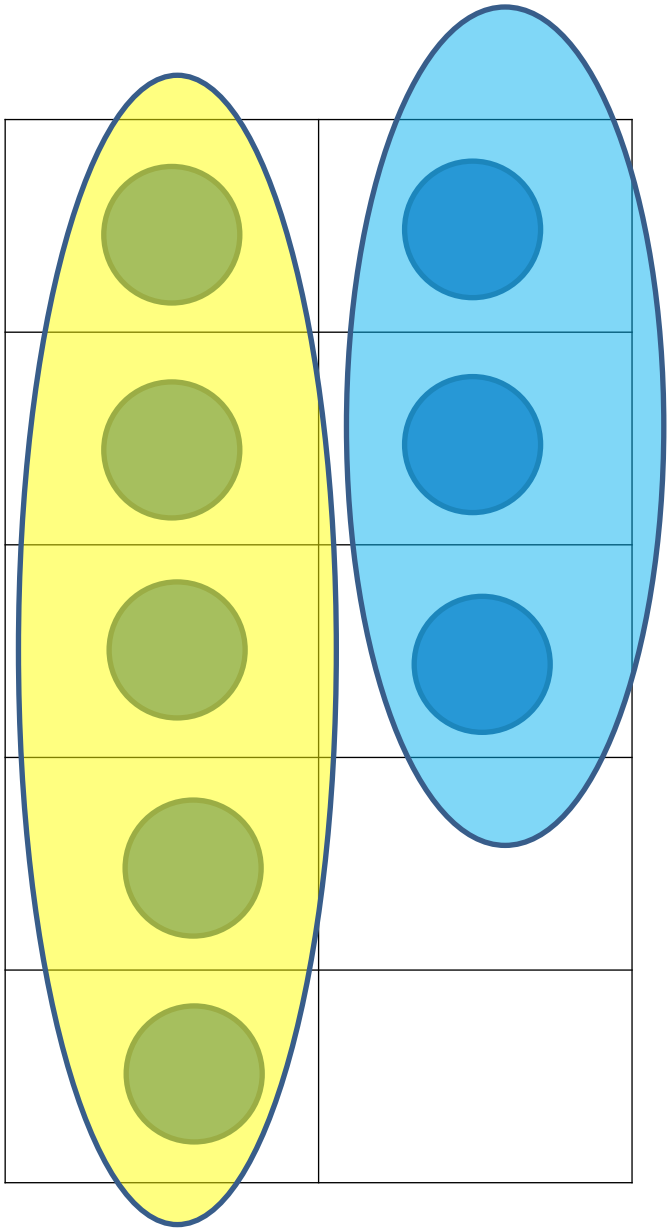

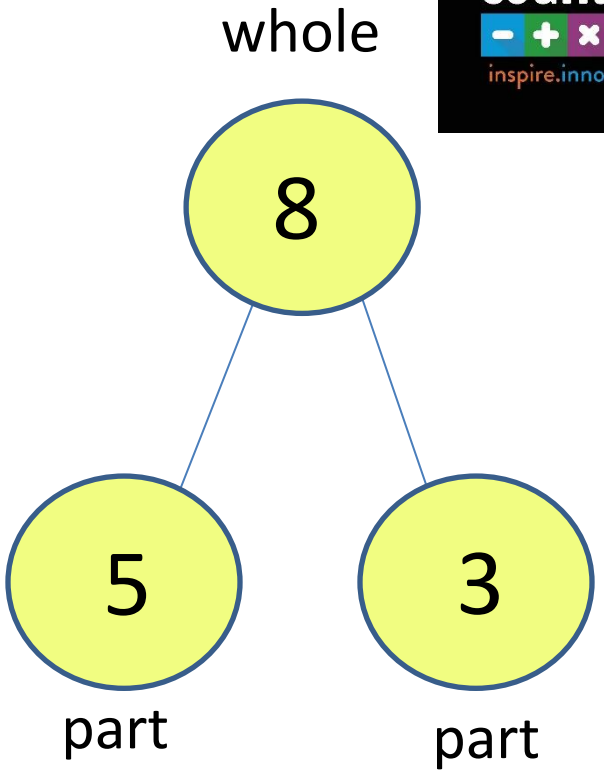

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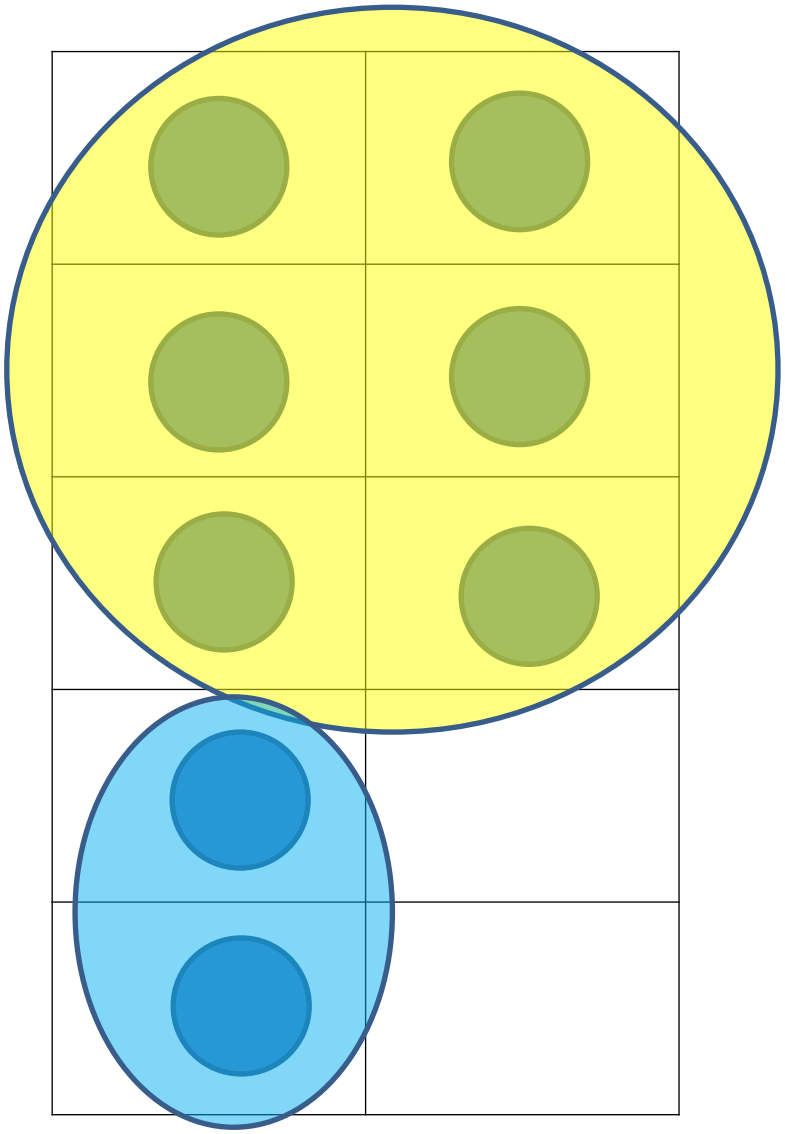
Connections/links

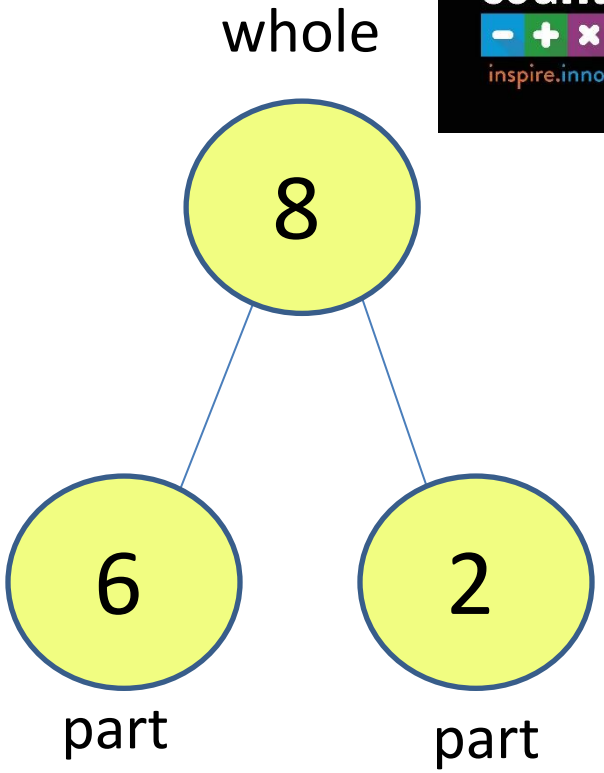
5 + 3 = 8

3+ 5 = 8

8 – 3 = 5

8 – 5 = 3





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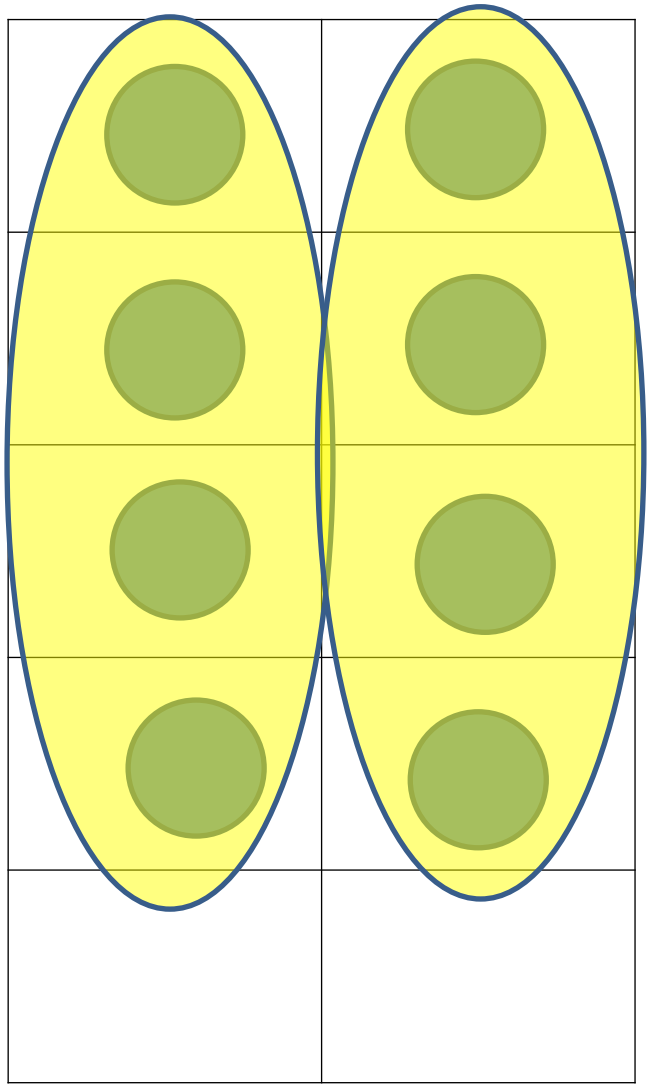
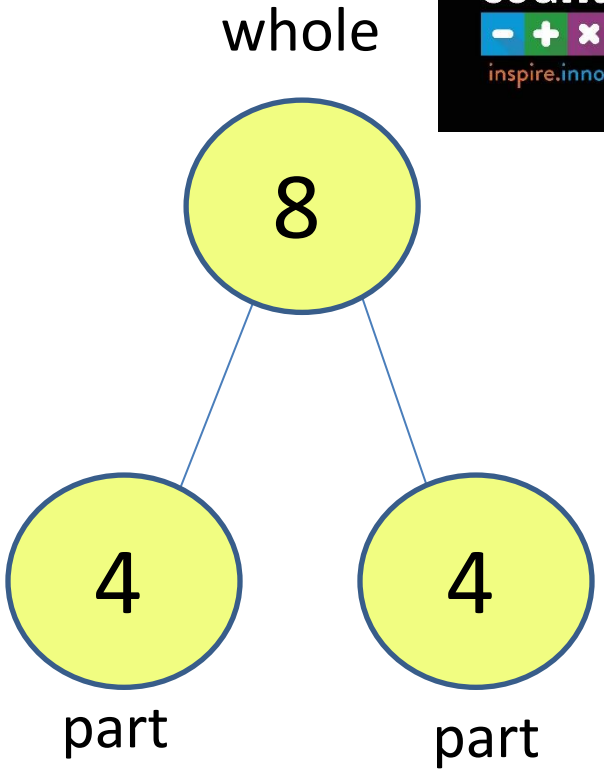


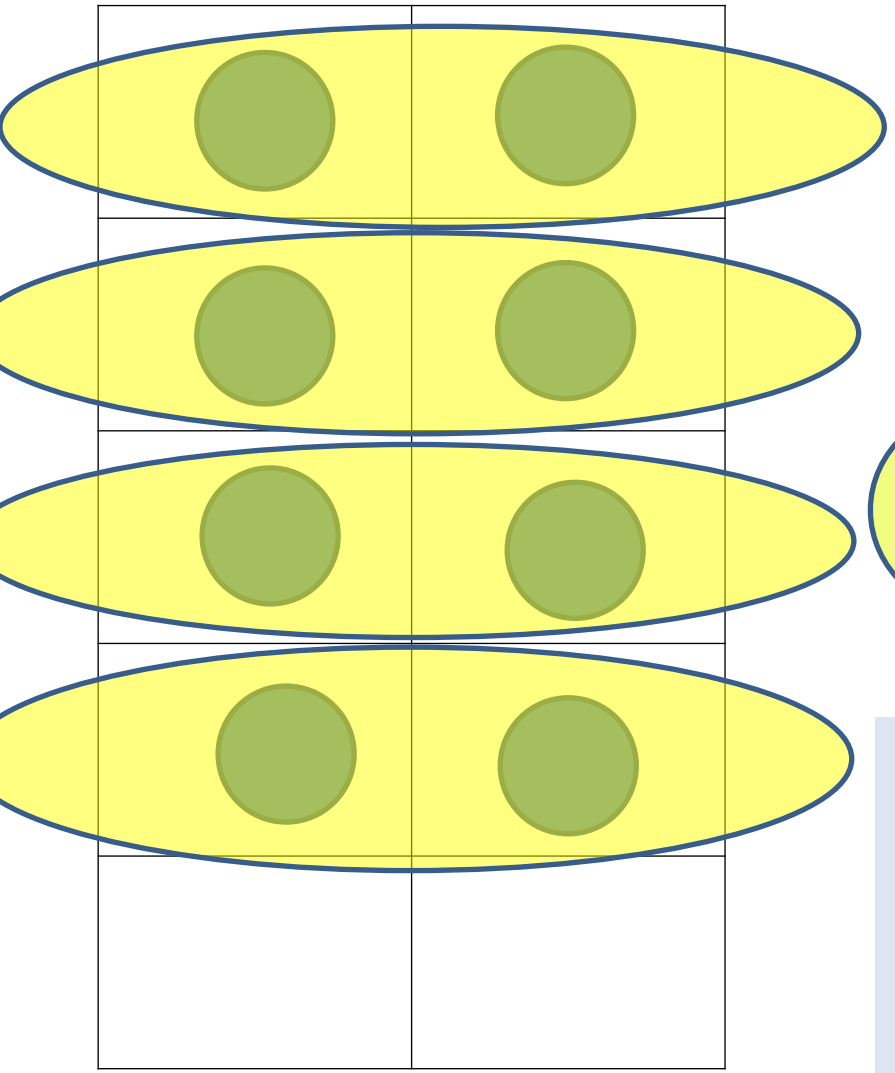


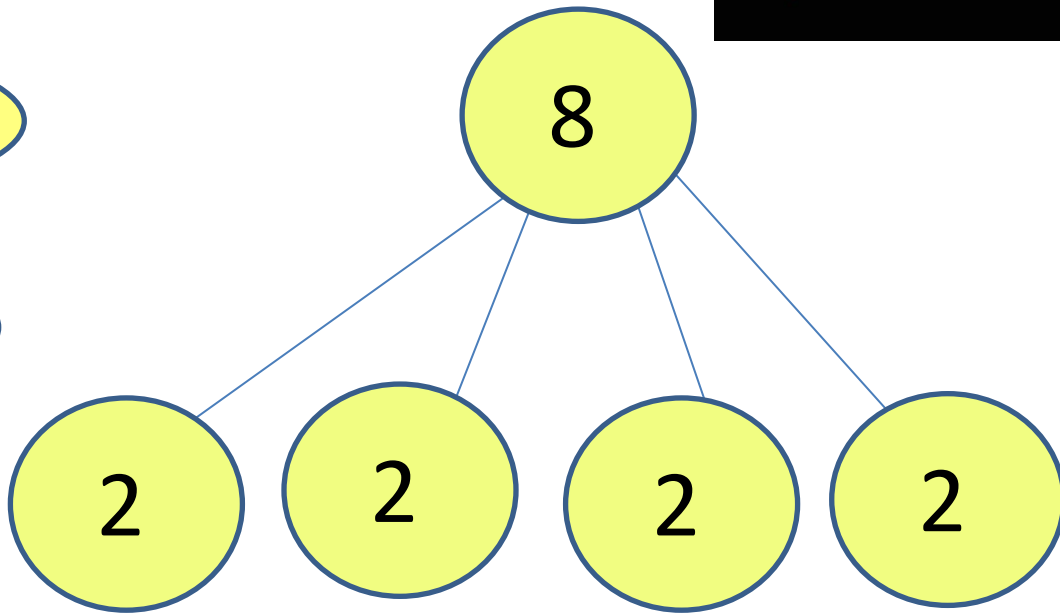
Connections/links

4 + 4 = 8

Double 4 = 8

Half of 8 = 4





Connections/links

4 groups of 2 = 8

2, 4, 6, 8

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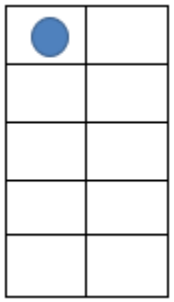
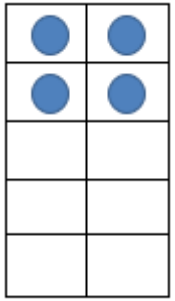
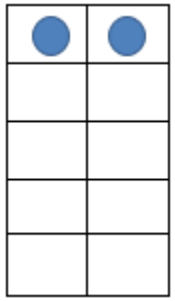
Recognise, identify and order numerals



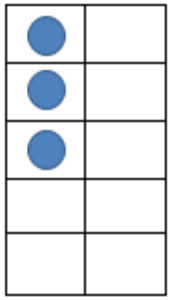


3

One



Two



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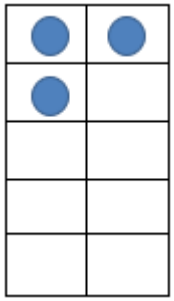
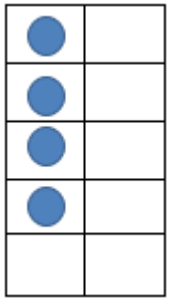


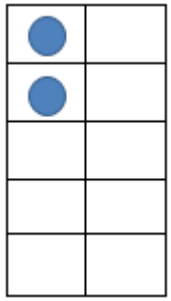
Four

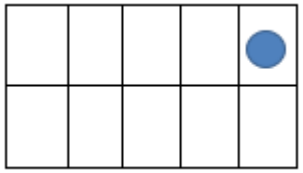
1



2

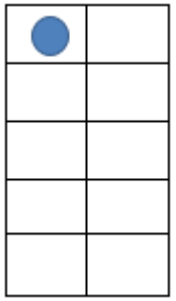
Three

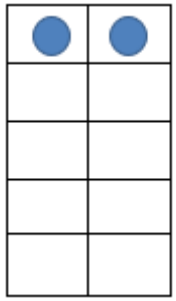




One

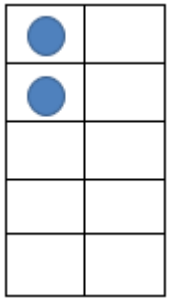
1

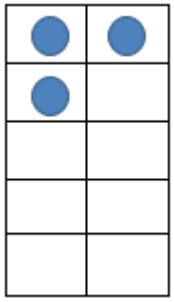




Two

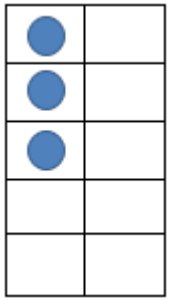
2

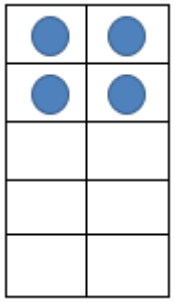




Three

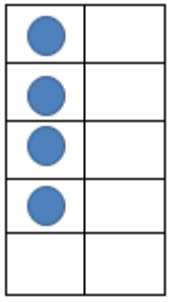
3





Four

4



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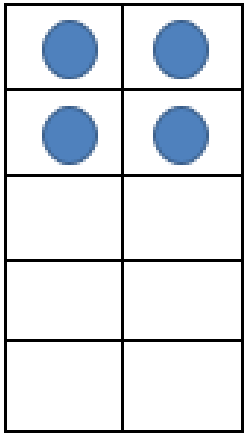

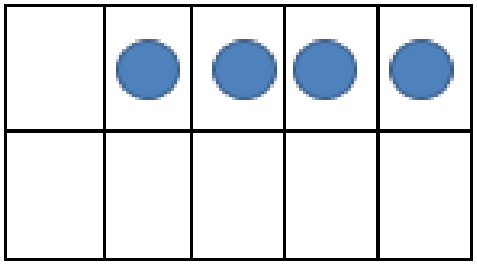

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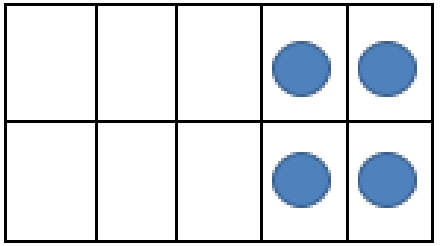
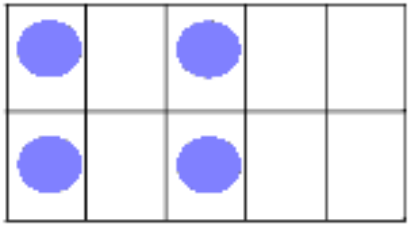
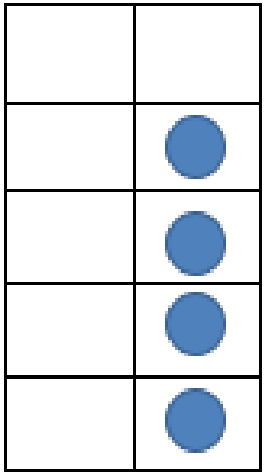
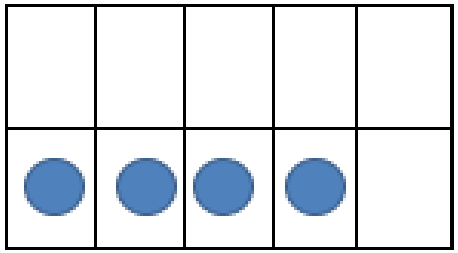


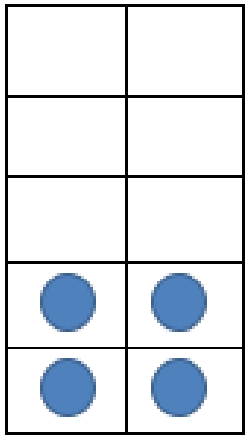
Four

4









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Count the ‘claps’

Learning to count backwards and forwards within 10 whilst developing the concept of before/after

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Count forwards from 0 to 10

count on us

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0	Zero	

count on us
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1	One	●
0	Zero	

count on us

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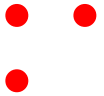
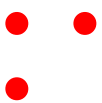
2	Two	
1	One	
0	Zero	

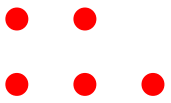
3	Three	
2	Two	
1	One	
0	Zero	

no quantity assigned

count on us
inspire.innovate.educate

4	Four	
3	Three	
2	Two	
1	One	
0	Zero	

count on us
inspire.innovate.educate

5	Five	
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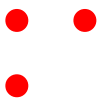
3	Three	
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1	One	
0	Zero	

count on us
inspire.innovate.educate

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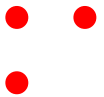
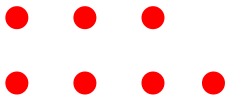
5	Five	
4	Four	
3	Three	
2	Two	
1	One	
0	Zero	

count on us
inspire.innovate.educate

7	Seven	
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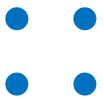
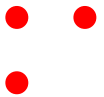
4	Four	
3	Three	
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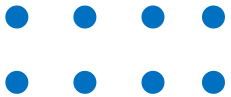
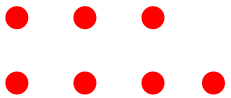
1	One	
0	Zero	

count on us
inspire.innovate.educate

8	Eight	
7	Seven	
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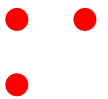
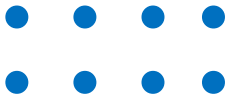
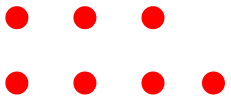
3	Three	
2	Two	
1	One	
0	Zero	

count on us
inspire.innovate.educate

9	Nine	
8	Eight	
7	Seven	
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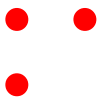
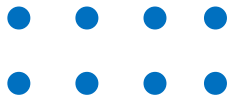
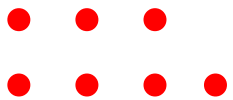
3	Three	
2	Two	
1	One	
0	Zero	

10	Ten	
9	Nine	
8	Eight	
7	Seven	
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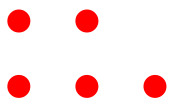
5	Five	
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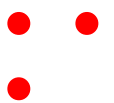
3	Three	
2	Two	
1	One	
0	Zero	

count on us

inspire.innovate.educate

Count backwards from 10 to 0

10	Ten	

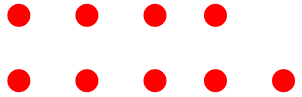
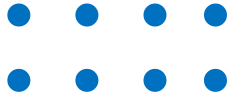
count on us

inspire.innovate.educate

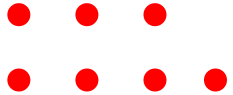
10	Ten	
9	Nine	

count on us

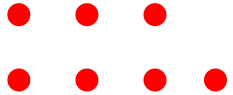
inspire.innovate.educate

10	Ten	
9	Nine	
8	Eight	

count on us
inspire.innovate.educate

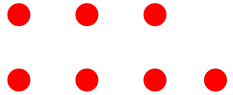
10	Ten	
9	Nine	
8	Eight	
7	Seven	

count on us
inspire.innovate.educate

10	Ten	
9	Nine	
8	Eight	
7	Seven	
6	Six	

count on us

inspire.innovate.educate

10	Ten	
9	Nine	
8	Eight	
7	Seven	
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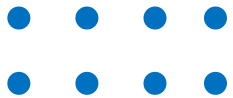
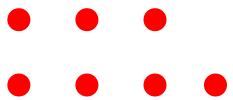
5	Five	

count on us
inspire.innovate.educate

10	Ten	
9	Nine	
8	Eight	
7	Seven	
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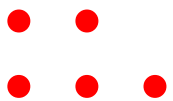
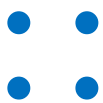
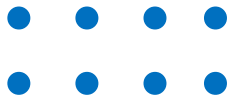
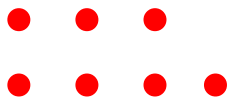
5	Five	
4	Four	

count on us
inspire.innovate.educate

10	Ten	
9	Nine	
8	Eight	
7	Seven	
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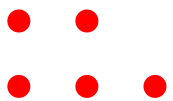
5	Five	
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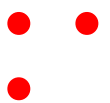
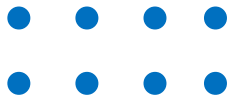
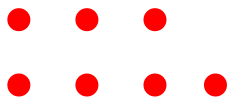
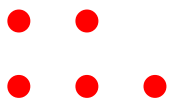
3	Three	

count on us
inspire.innovate.educate

10	Ten	
9	Nine	
8	Eight	
7	Seven	
6	Six	
5	Five	
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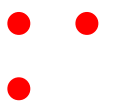
3	Three	
2	Two	

count on us
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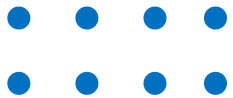
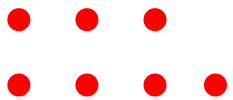
10	Ten	
9	Nine	
8	Eight	
7	Seven	
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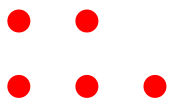
5	Five	
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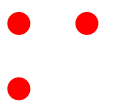
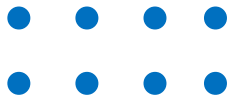
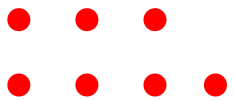
3	Three	
2	Two	
1	One	

10	Ten	
9	Nine	
8	Eight	
7	Seven	
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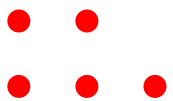
5	Five	
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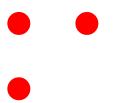
3	Three	
2	Two	
1	One	
0	Zero	

Try this activity again until you can do it without looking at the slides.

count on us

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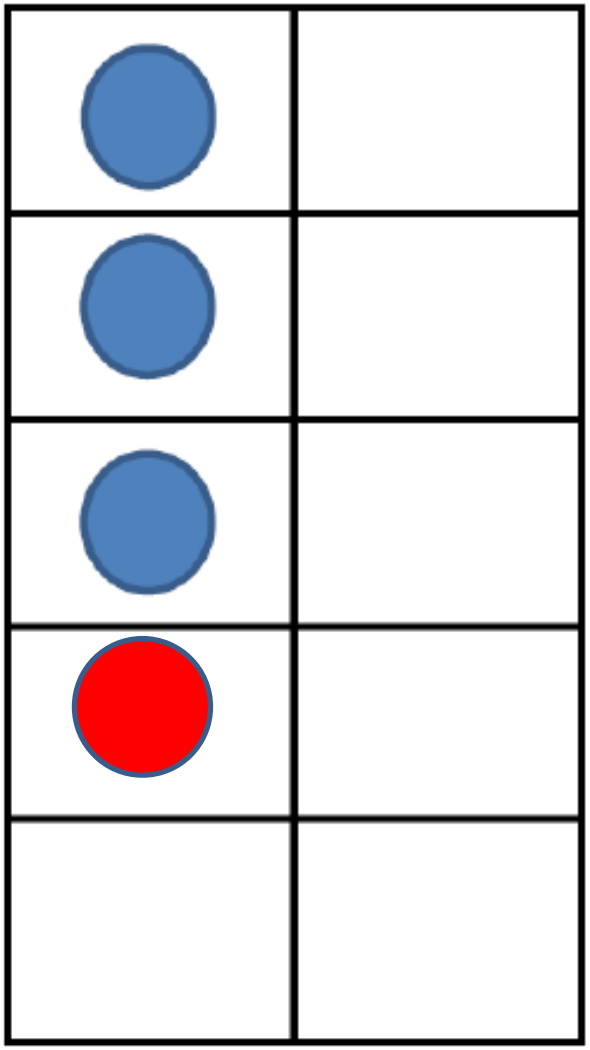
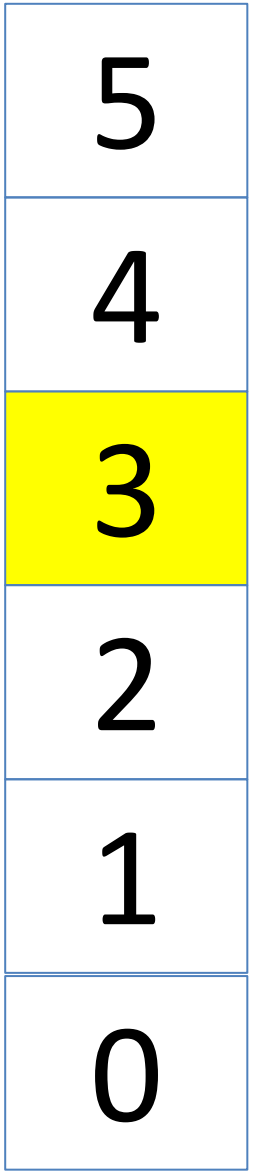
Number word sequences, before/after, more/less than



1 more than 3 is 4

1 less than 4 is 3

What is 1 **more** than 3?



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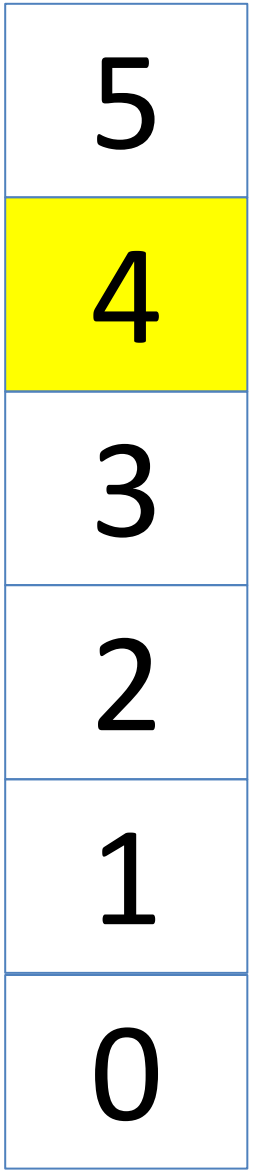
What is 1 **more** than 4?



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What is 1 **less** than 2?

5
4
3
2
1
0

count on us
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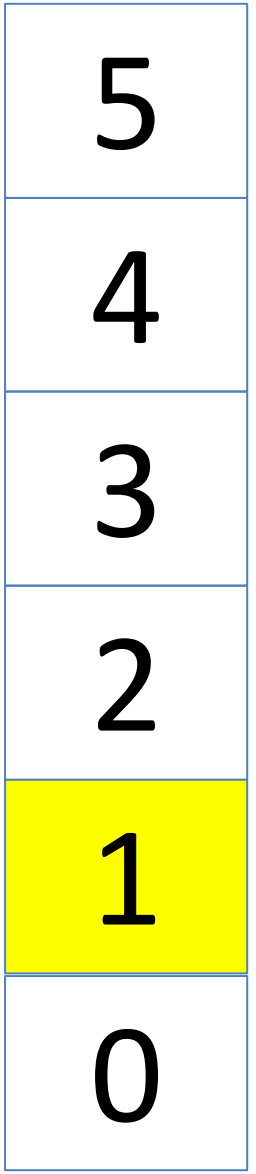
What is 1 **less** than 1?



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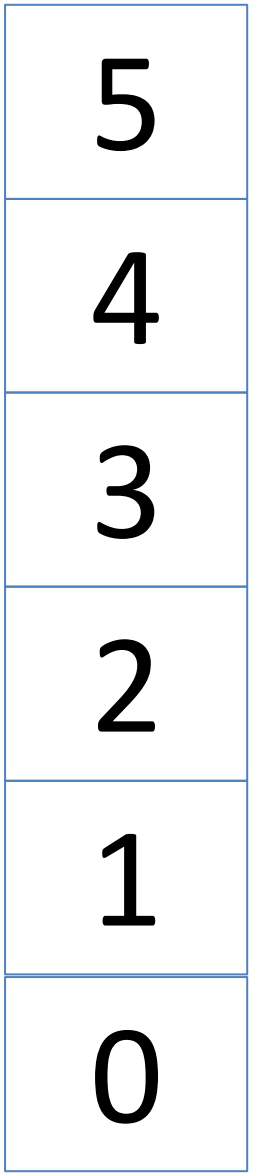
Other questions to pose!

Which number comes before 3?

Which number comes after 3?



count on us

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#npfsmaths

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Twitter : @CountOnUsEd

Other Activities you can try

- Count on from 4 together ….. 4,5,6,7

- Count a sequence of three numbers 5, 6, 7 and learners to say the following three numbers in sequence … 8, 9 10

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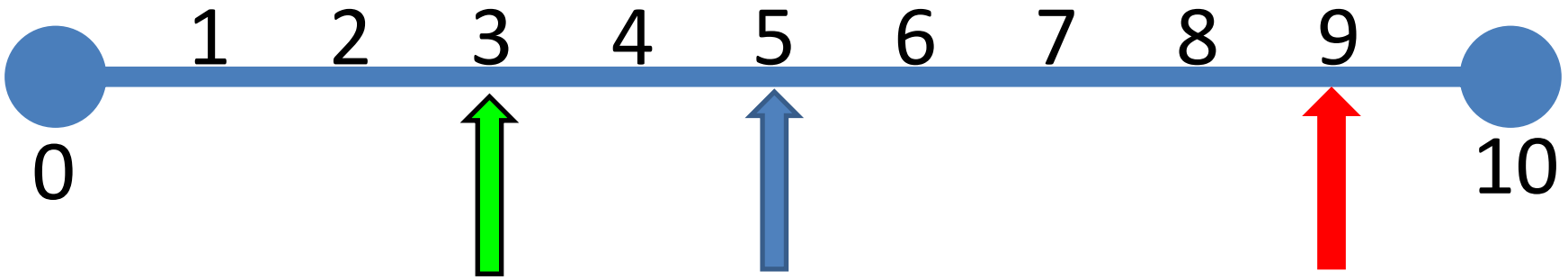
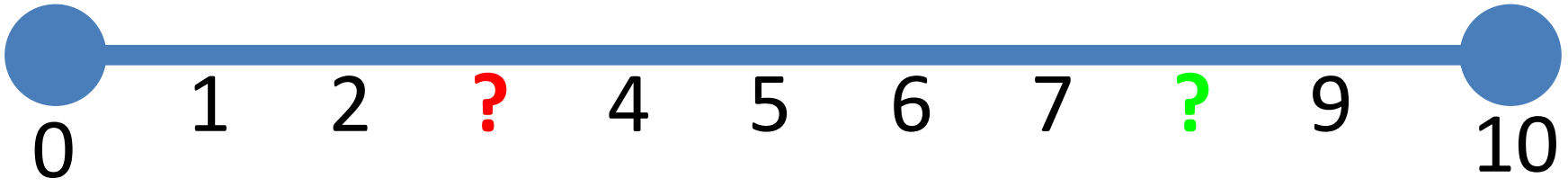
Other Activities you can try

- Copying and saying short forward number sequences (start from all different numbers)
- Saying alternate numbers 1,**2**,3,**4**,5,**6**
- Saying the next number 6,7,8,**9**
- Saying the next 1, 2 or 3 number words forwards 1 2 3 **4 5 6**
- Saying the number after 17 **18**
- Backward Number Word Sequences - as above but counting backwards
- I will say 9, 8, 7, …. you say….. 6, 5, 4

Using the empty number line to estimate



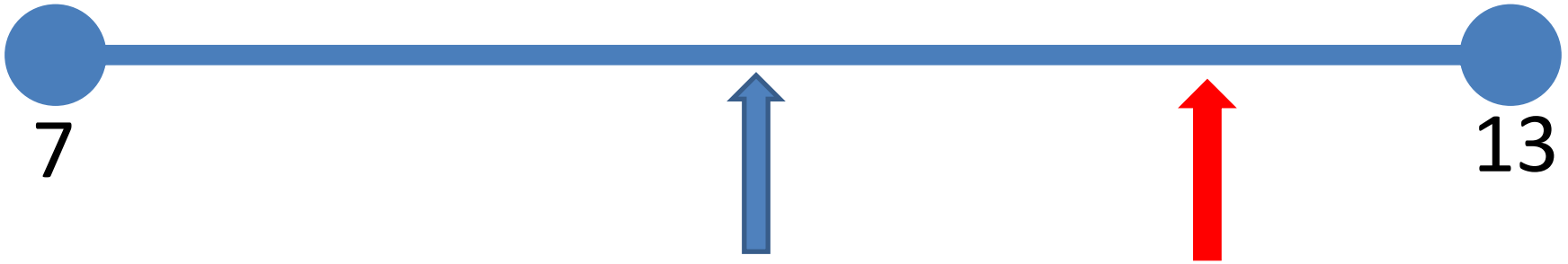
Using the empty number line with missing numbers in sequence



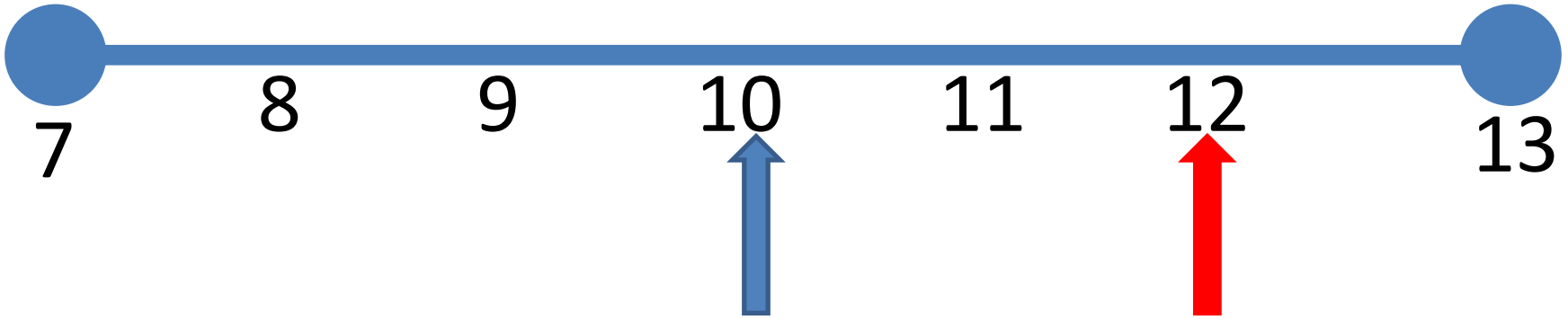
Using the empty number line with other sequences

Using the empty number line with missing numbers in sequence

Using the empty number line to estimate



Using the empty number line to estimate



Sequencing

5, 6, 7, ?, ?, 10, 11, 12, ?, 14, ?, 16

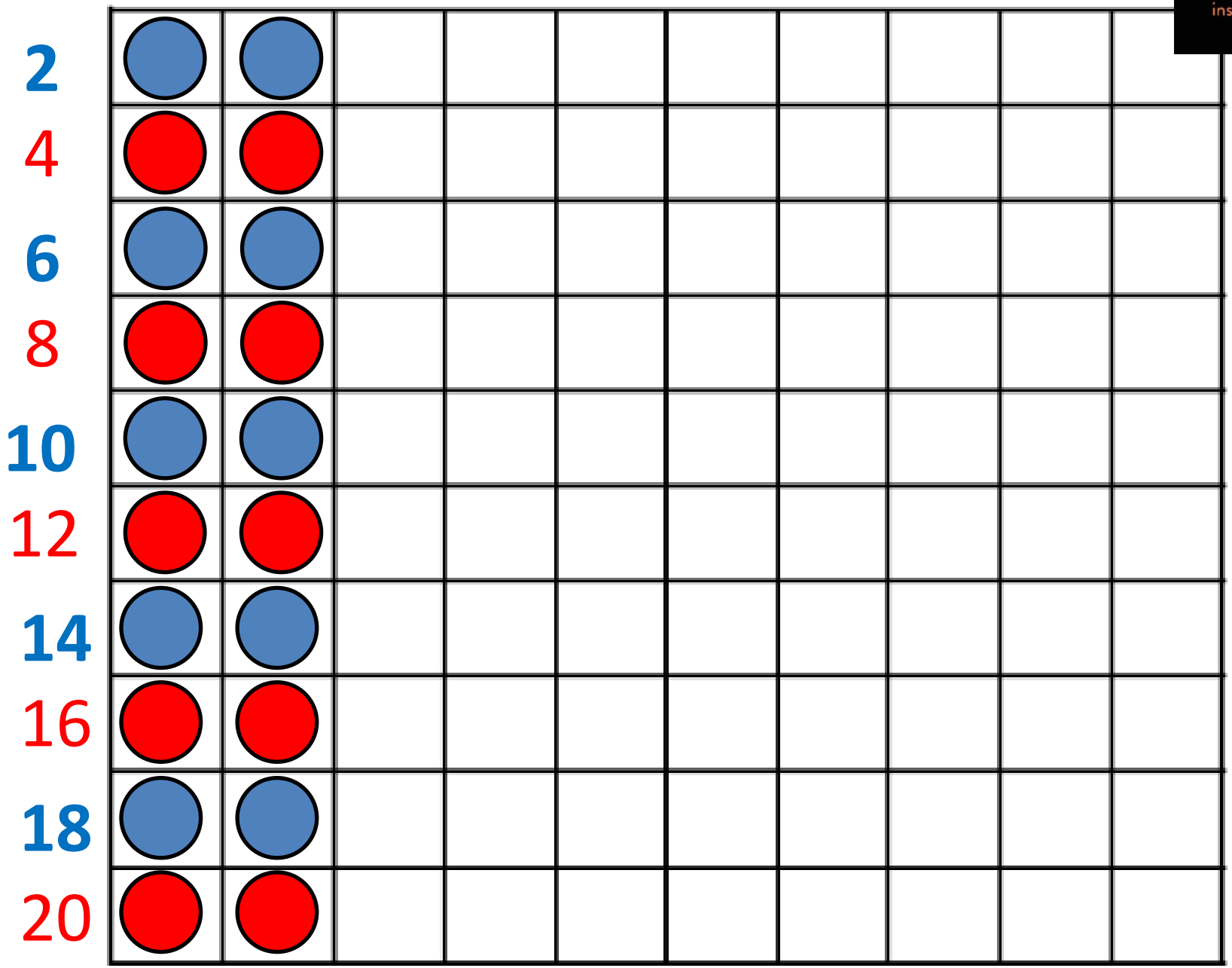
What are the missing numbers?

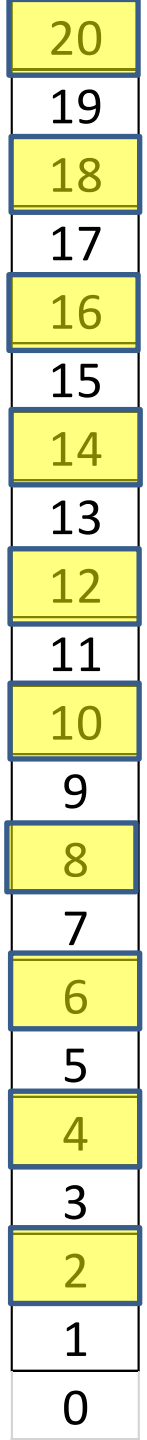
Skip counting in 2s

count on us
inspire.innovate.educate

count on us

inspire.innovate.educate





Skip counting in 2s on the vertical number line

count on us
inspire.innovate.educate

count on us

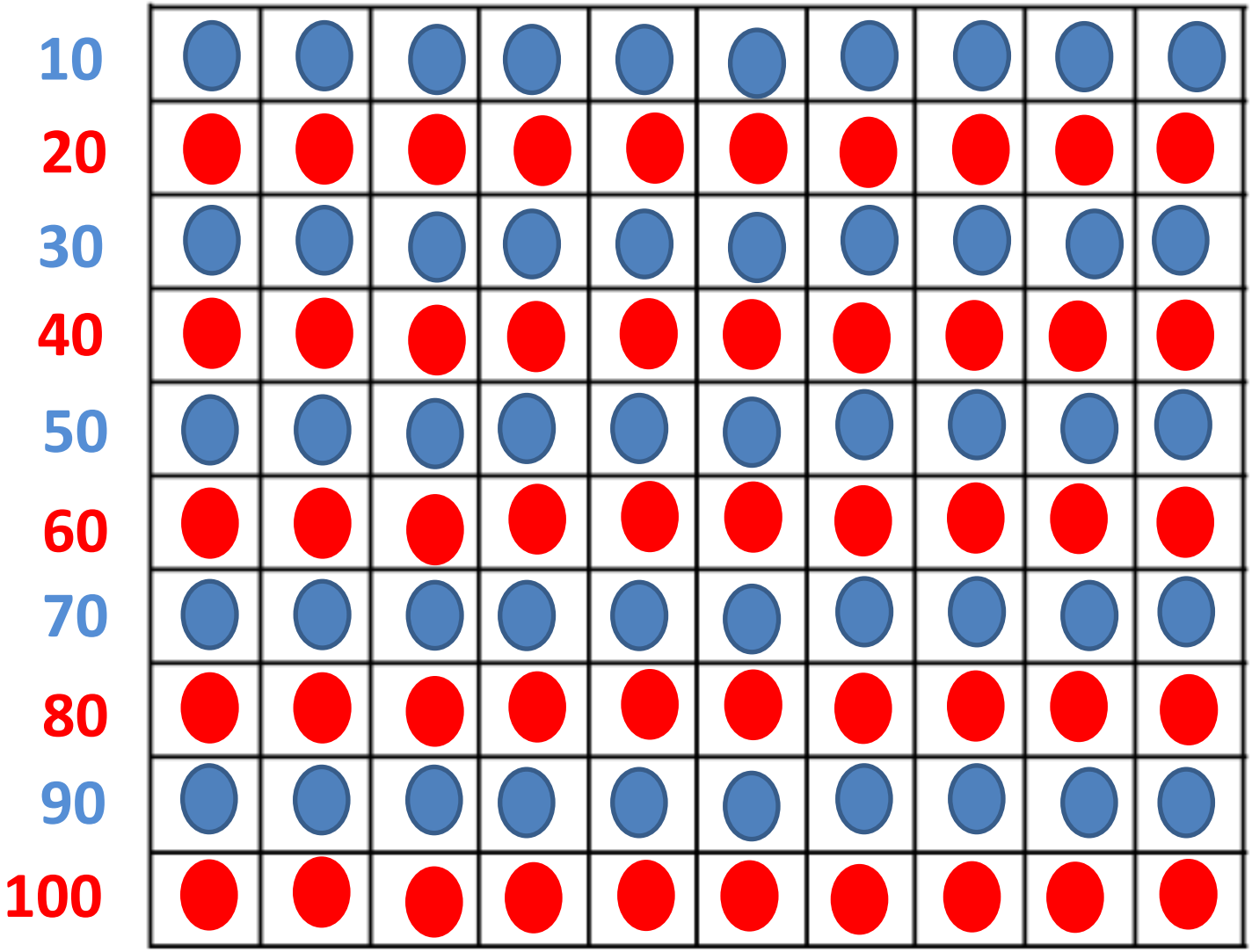
inspire.innovate.educate

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

Skip counting in 10s

count on us
inspire.innovate.educate

The Big Grid



count on us
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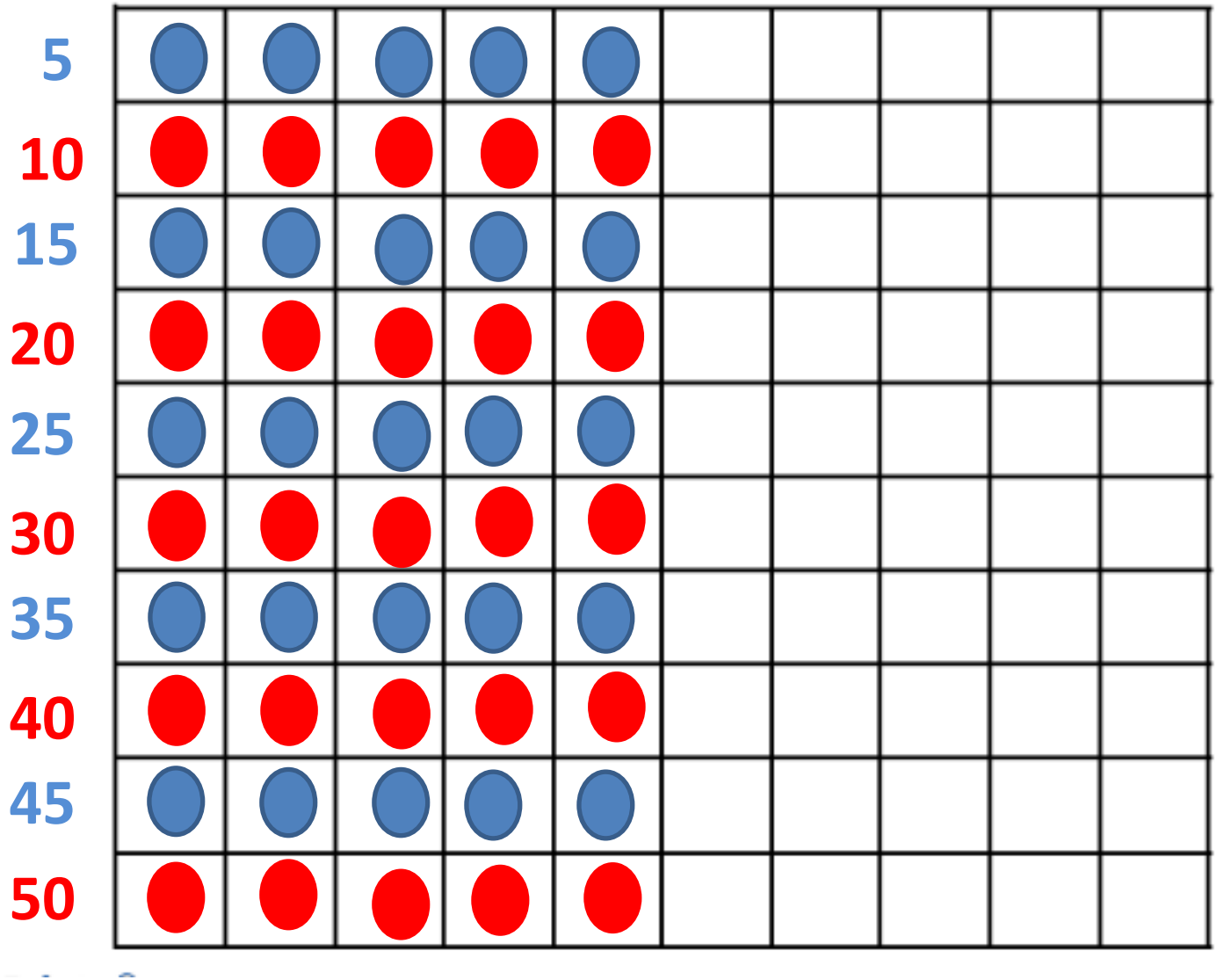
count on us
inspire.innovate.educate

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

Skip counting in 5s

count on us
inspire.innovate.educate

The Big Grid



count on us
inspire.innovate.educate

count on us
inspire.innovate.educate

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 within 5 then 10

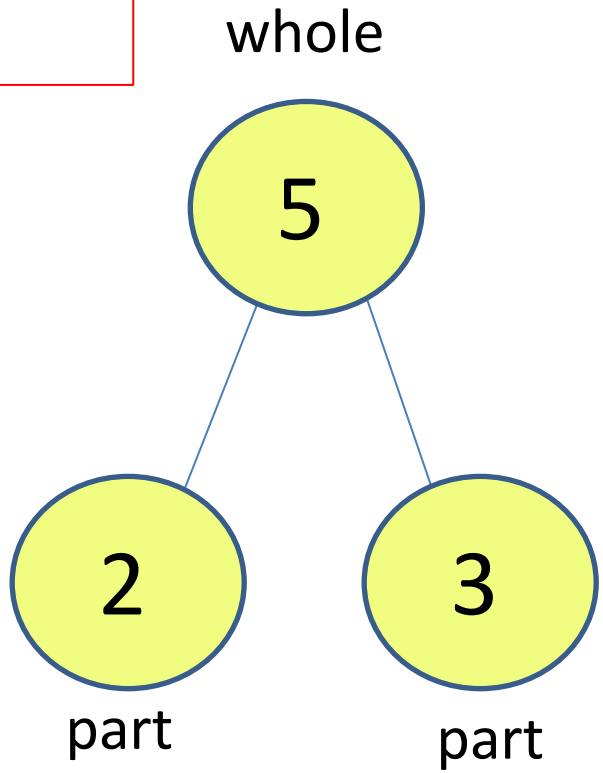
Partitioning means spilt a number into its component parts

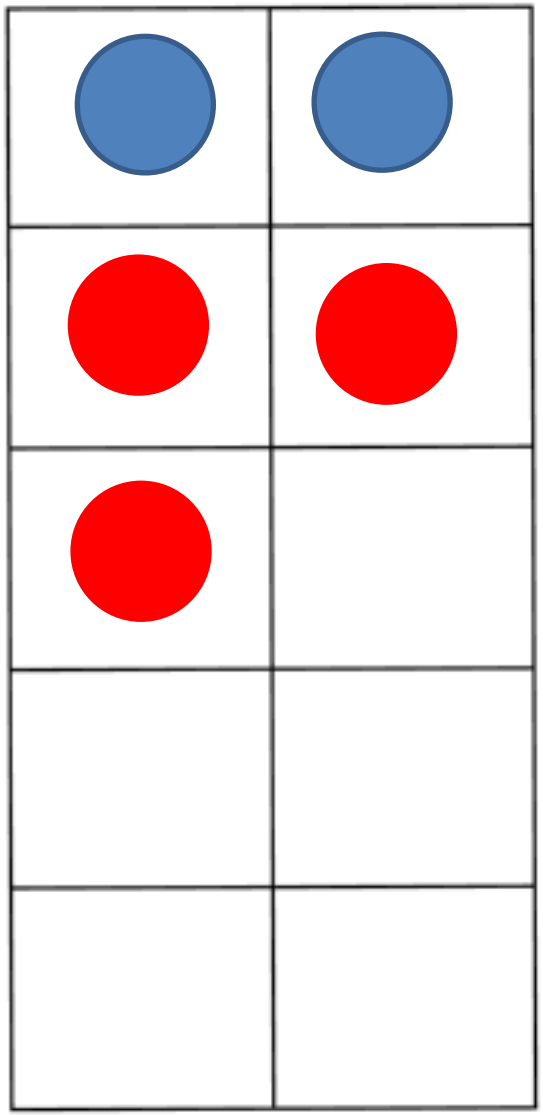
Link to part part whole from earlier slides

Q) How many blue and red dots are there?

Blue dots = 2

Red dots = 3





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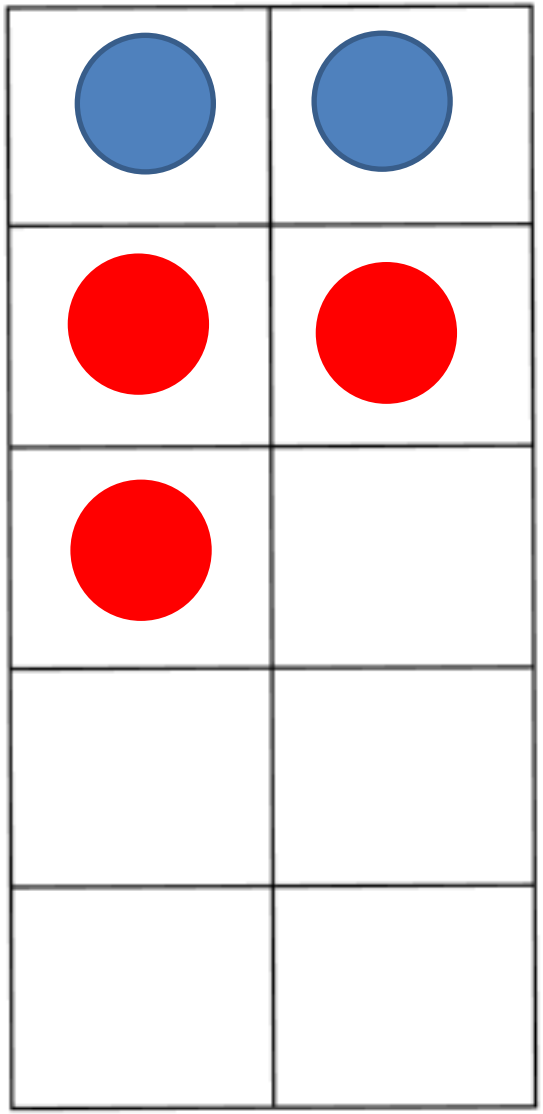
Q) How many blue and red dots are there?

Blue dots = 2

Red dots = 3



$2 + 3 = 5$

$3 + 2 = 5$

$5 - 2 = 3$

$5 - 3 = 2$

Subitizing!!!!

count on us
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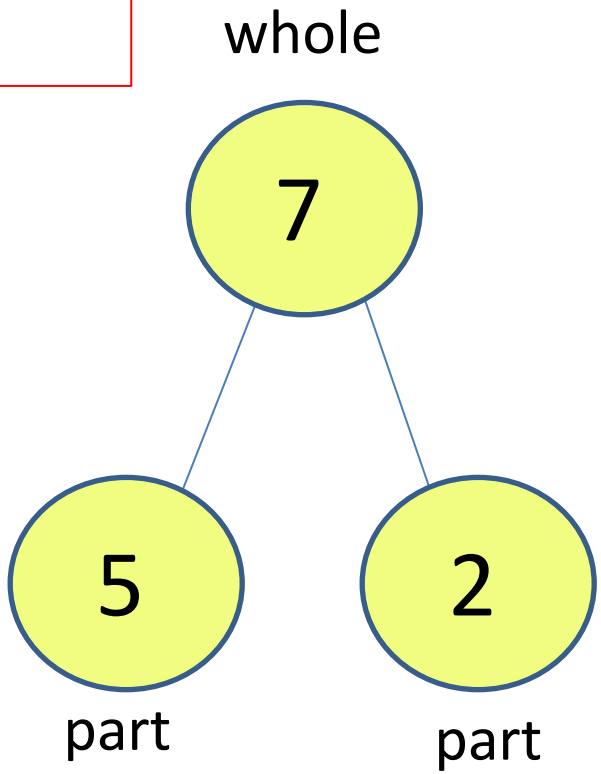
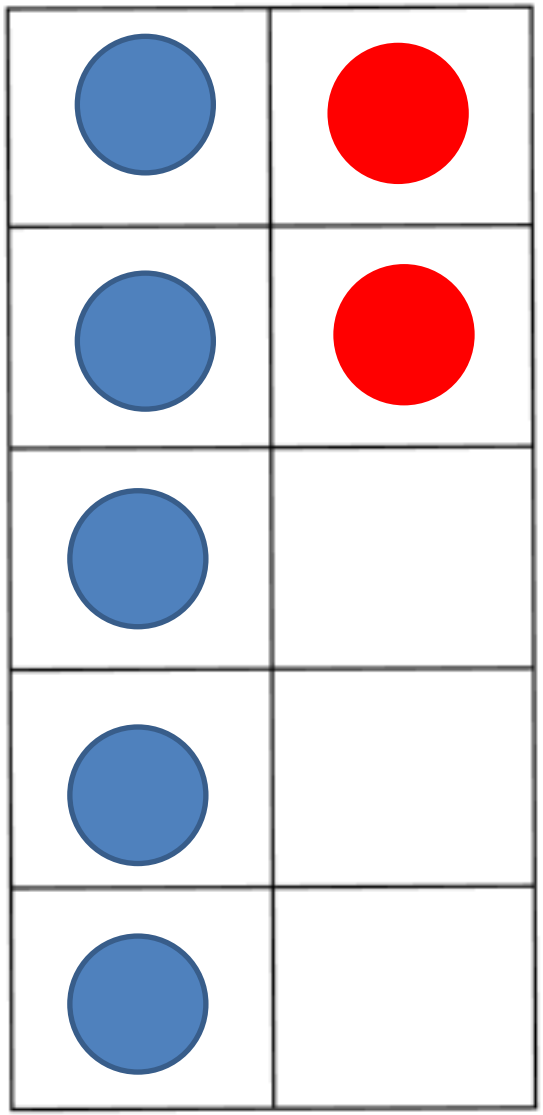
Q) How many blue and red dots are there?

Blue dots = 5

Red dots = 2

Subitizing!!!!



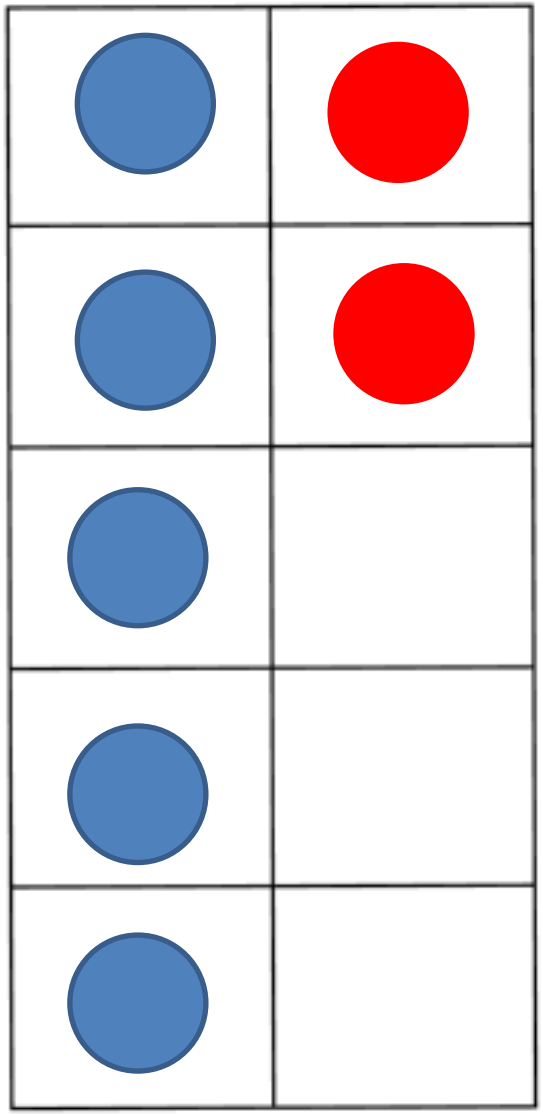


count on us
inspire.innovate.educate

Q) How many blue and red dots are there?

Blue dots = 5

Red dots = 2



$5 + 2 = 7$

$2 + 5 = 7$

$7 - 5 = 2$

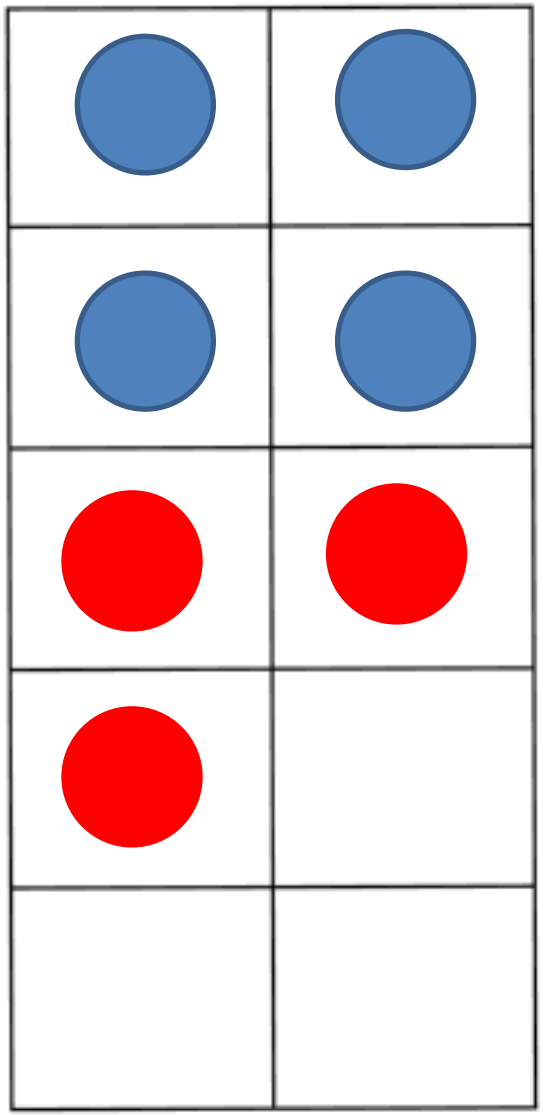
$7 - 2 = 5$

count on us
inspire.innovate.educate

Q) How many blue and red dots are there?

Blue dots = 4

Red dots = 3



$4 + 3 = 7$

$3 + 4 = 7$

$7 - 4 = 3$

$7 - 3 = 4$

count on us
inspire.innovate.educate

The equal sign

It means ‘the same as’
Its positions is interchangeable
There can be more than one equal sign

$8 = 6 + 2$

$8 = 5 + 3$

$8 = 10 - 2$

$2 + 8 = 7 + 3$

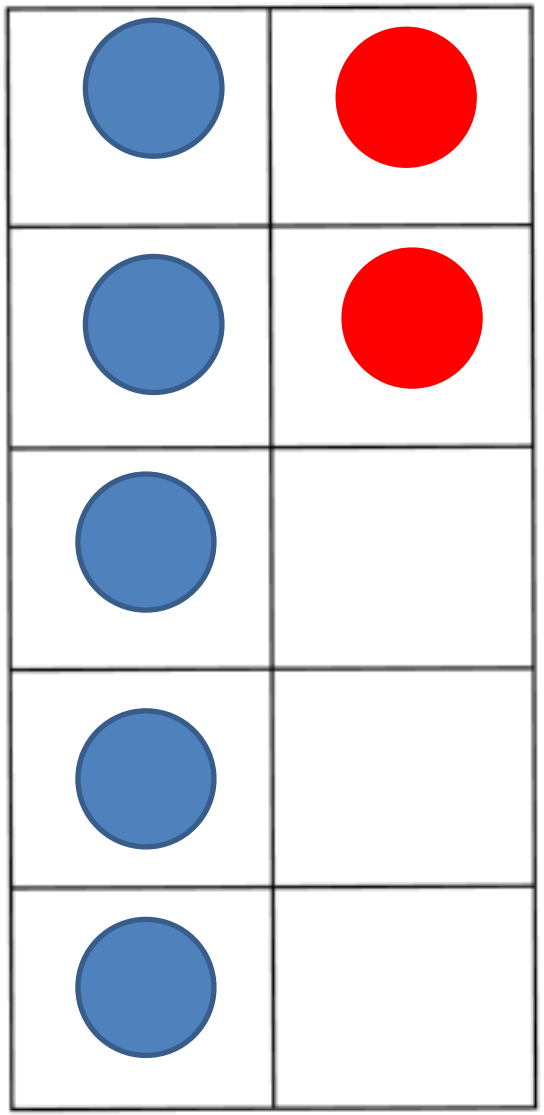
The equal sign

It means ‘the same as’
Its positions is interchangeable
There can be more than one equal sign

8 = 6 + 2 = 5 + 3 = 10 – 2 = double of 4

The equal sign

$5 + 2 = 7$



The equal sign

$$8 = 9 - 1$$

count on us
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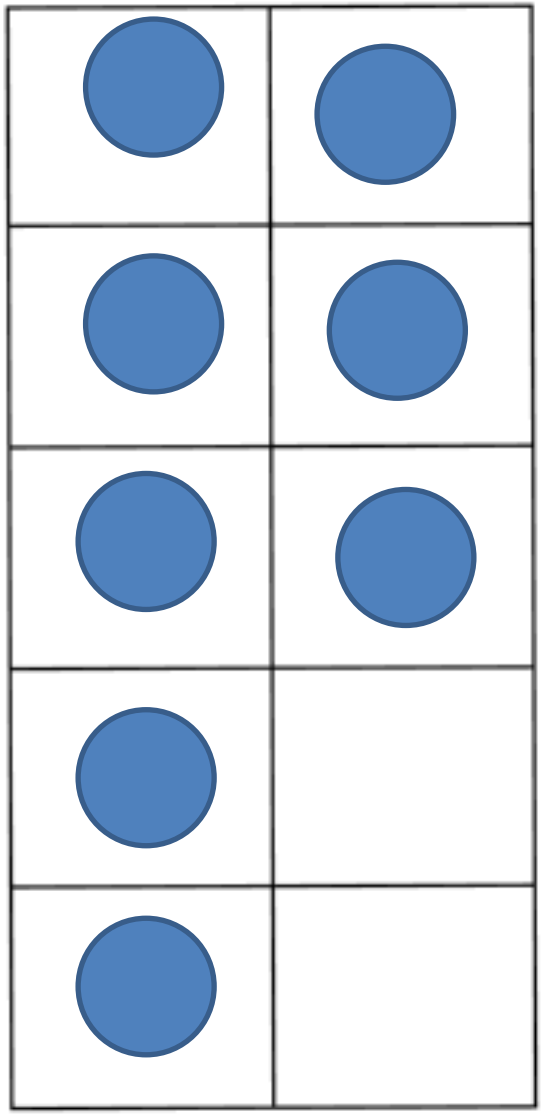
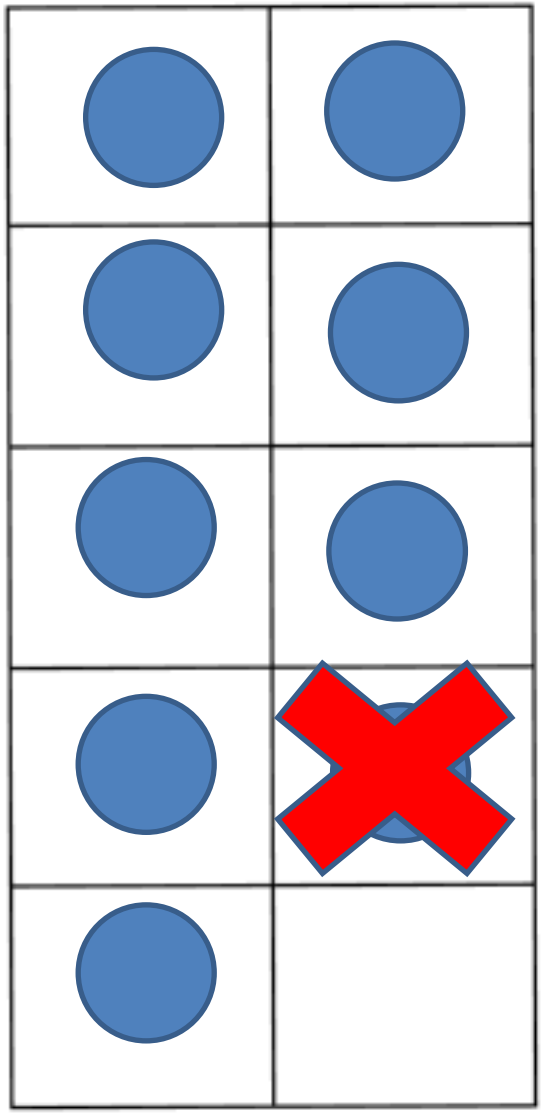
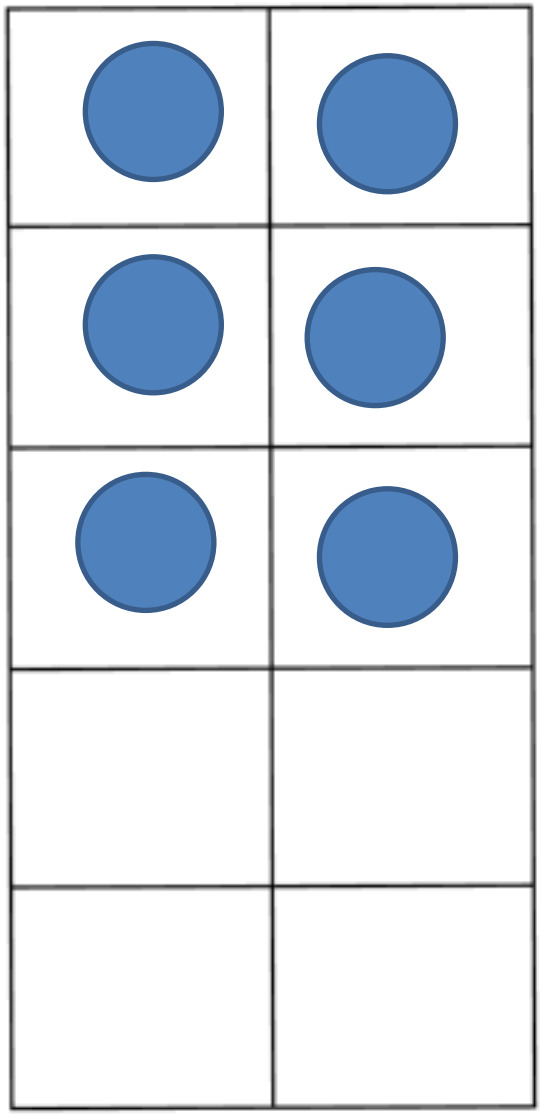
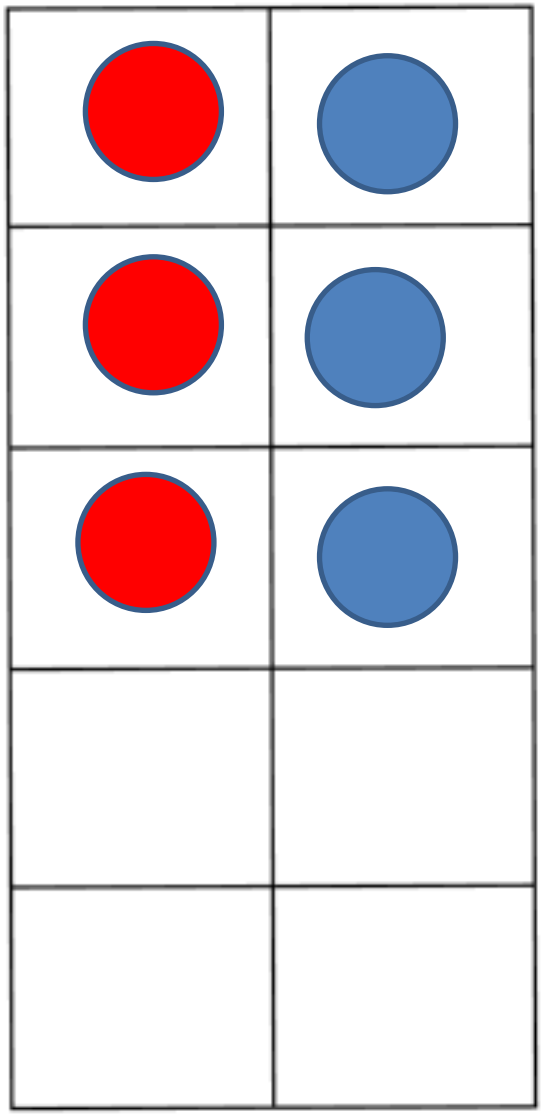




The equal sign

6 = double of 3





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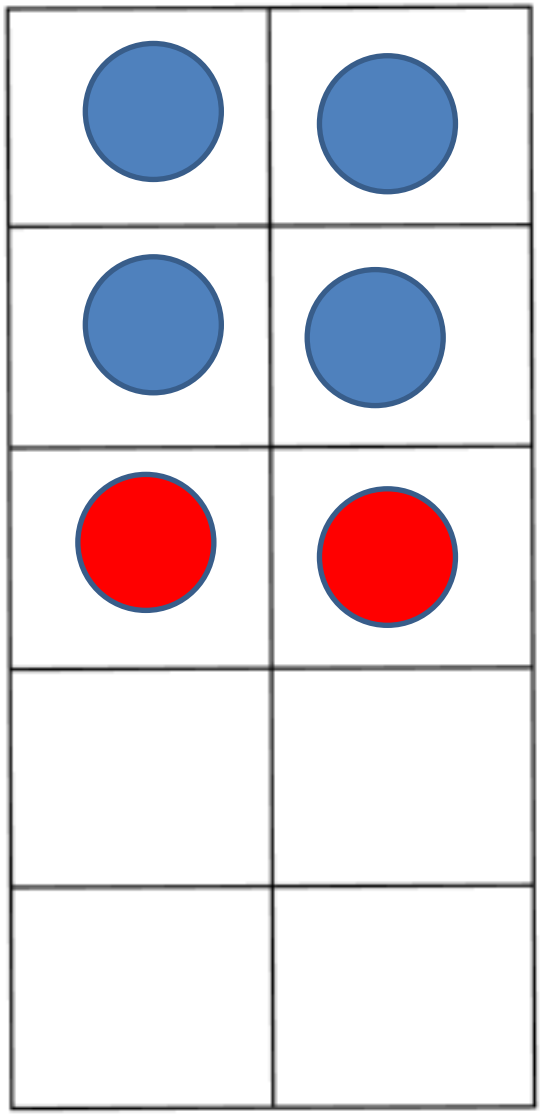
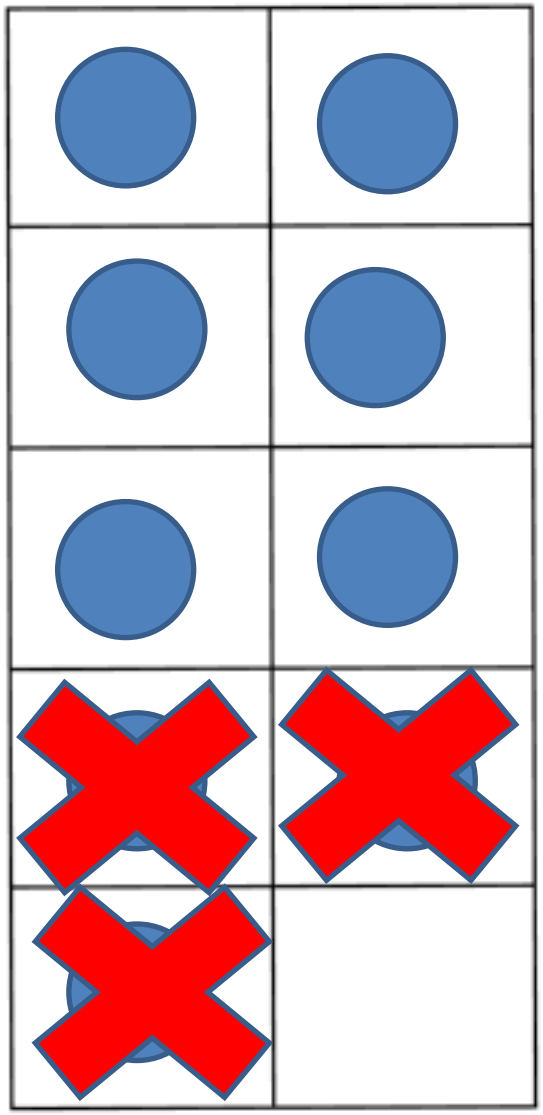
$4 + 2 = 9 - 3$

count on us
inspire.innovate.educate





The equal sign

count on us
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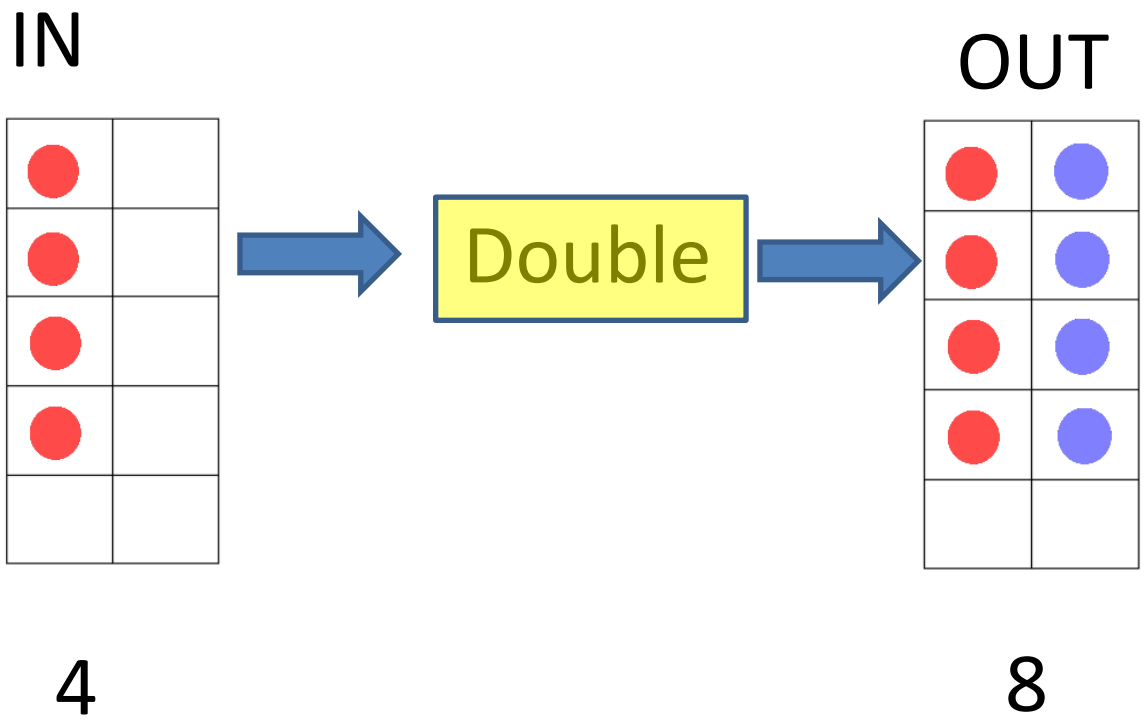
$4 + 3 = 9 - 2$

4 = half of 8

Halves and doubles

count on us

inspire.innovate.educate

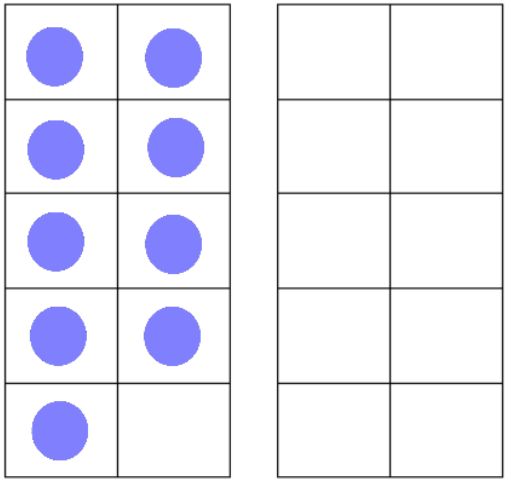


So double 4 is 8

and 4 is half of 8

Subitizing!!!!

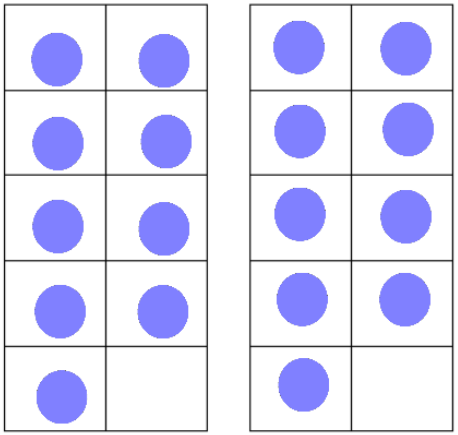
IN



9

Double

OUT



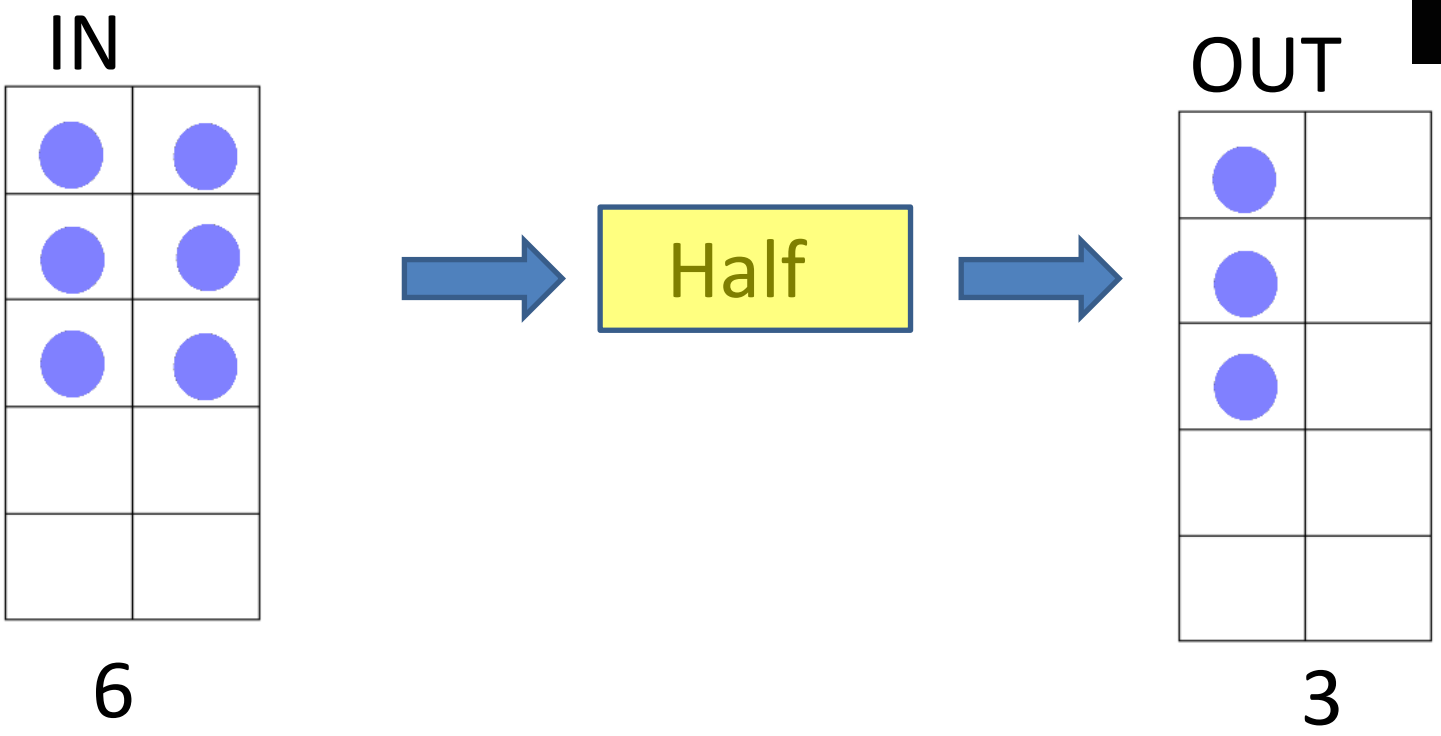
18

So double 9 is 18

and 9 is half of 18

Subitizing!!!!

count on us
inspire.innovate.educate



So half of 6 is 3

and 6 is double of 3

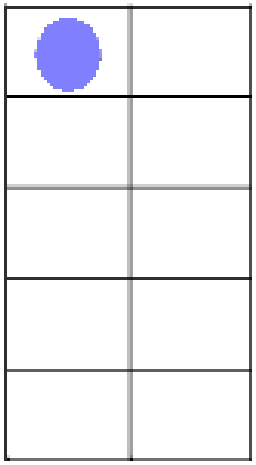
Why are doubles important

$7 + 8$

$= 7 + 7 + 1$

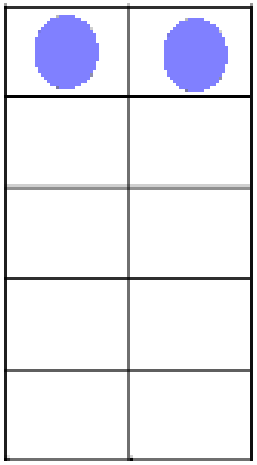
$= 15$

Odd and even numbers



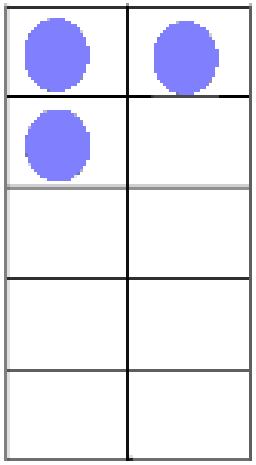
1

Odd



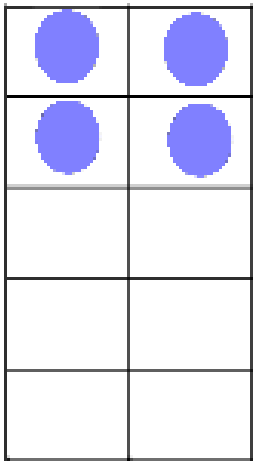
2

Even



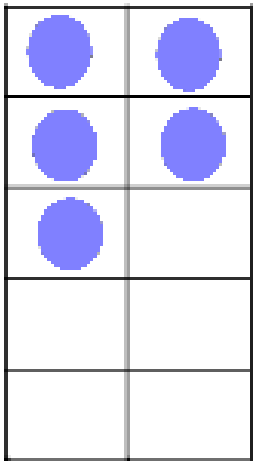
3

Odd



4

Even



5

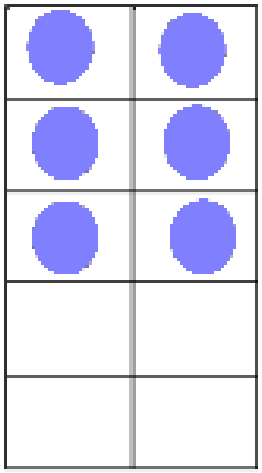
Odd

Ask learners:

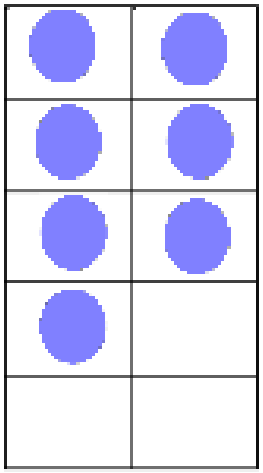
What do you notice?

What do you wonder?

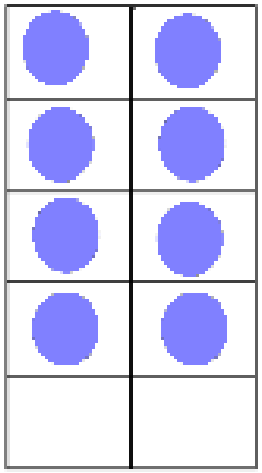
Odd and even numbers



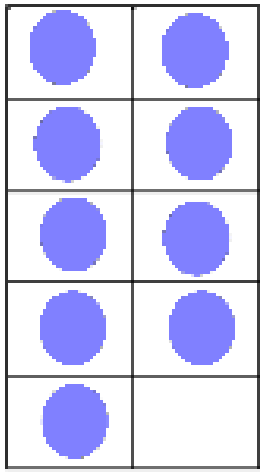
6
Even



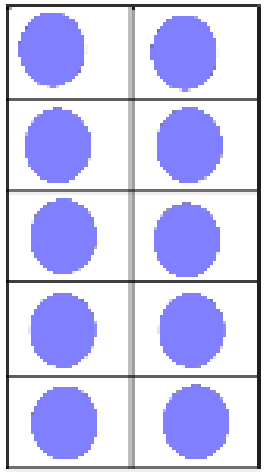
7
Odd



8
Even



9
Odd



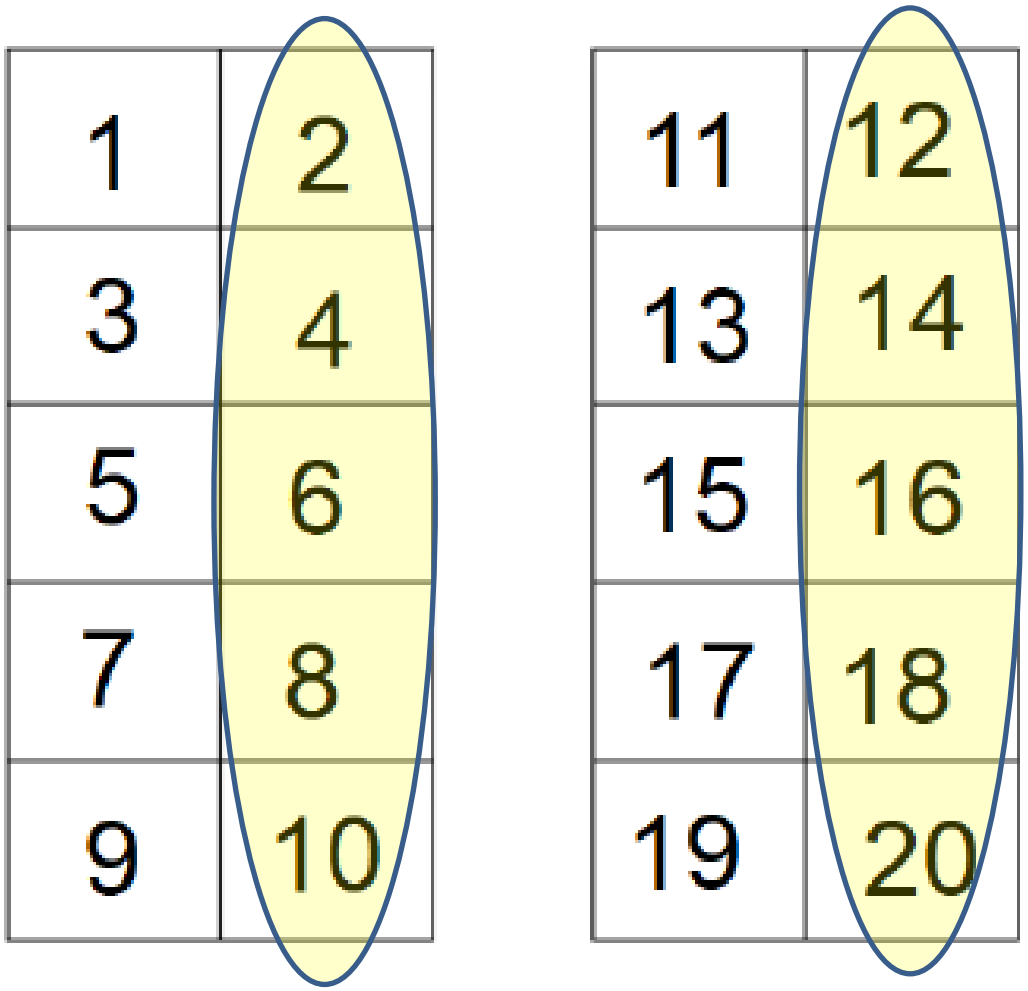
10
Even

Ask learners:

What do you notice?

What do you wonder?

Write the numbers 1 – 10 in the Ten Frame



Learning Together Session 1
Early Number Development:

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- Subitising
- Part part whole relationships
- Recognise, identify and order numerals
- Assigning quantities to number and number name
- Number sequences –
- Partitioning within 5 then 10
- Halves and doubles
- Odd and Even numbers

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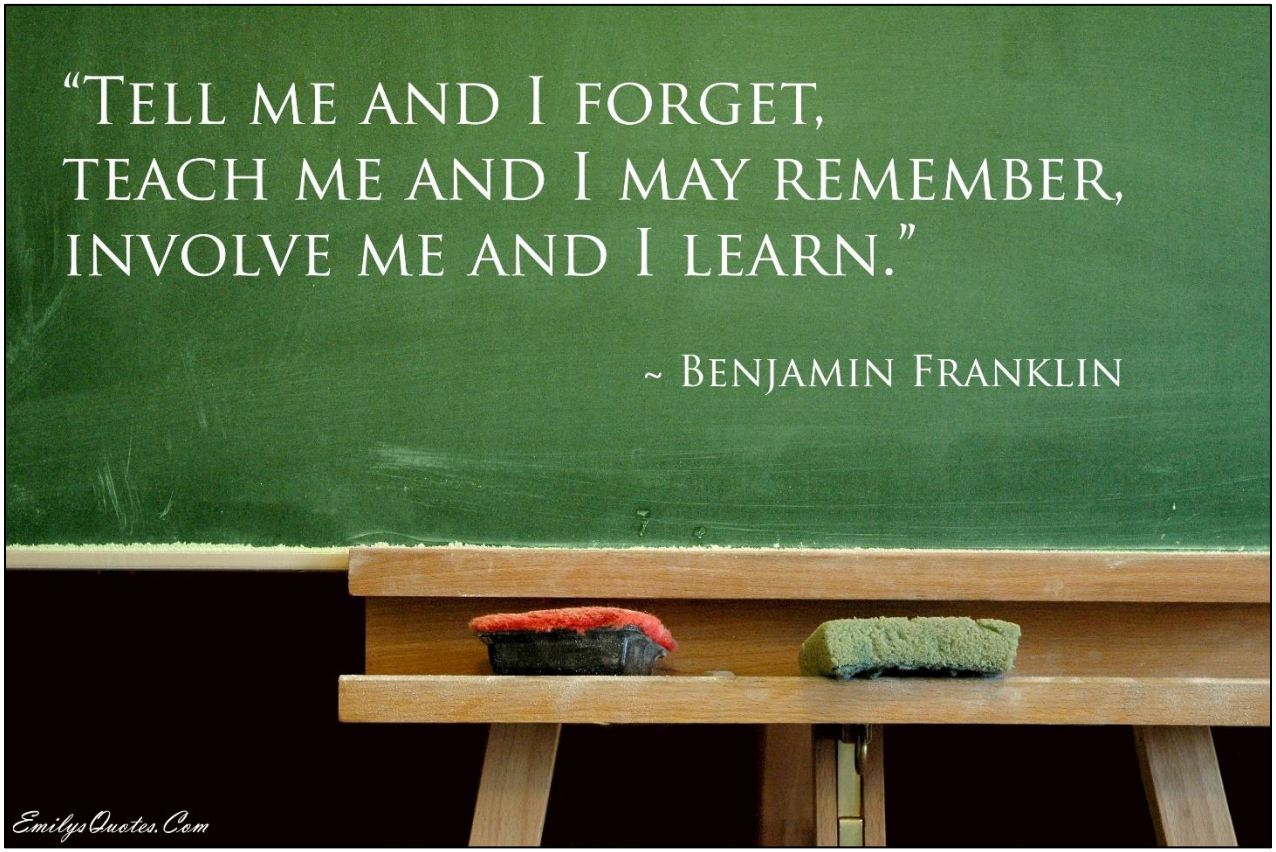
Slides and resources at

www.countonus.org.uk/learning-together/



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Slides and resources at

www.countonus.org.uk/learning-together/

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Slides and resources at
www.countonus.org.uk/learning-together/

#npfsmaths

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Early Number Sense: Other websites with great resources

- I see Maths – dot cards, five/ten frames, part-whole cards, double cards, presentation on equals sign - http://www.iseemaths.com/early-number/
- Learn through story and song – all about number - https://www.bbc.co.uk/iplayer/group/b08bzfnh
- Maths through stories – various numeracy and mathematics concepts explored - https://www.mathsthroughstories.org/recommendations.html
- Nrich – activities to support the development of essential building blocks for mathematical thinking, reasoning and problem solving - https://nrich.maths.org/13371
- Interactive number sense activities - https://stevewyborney.com/2017/02/splat/

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