



Maths at Marden

Key Stage 1

AET Mathematics

Why do we follow AET?

Show

Do

Think

Explain

Solve

C.P.A. approach

Concrete Using real objects

Pictorial Diagram or picture

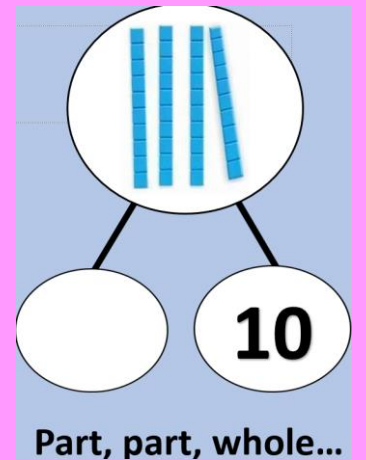
Abstract Using mathematical notation

Place value

Each year the children will always start off exploring place value. The numbers and complexity of this increases as they go through the school.

Make the number 19 using Base 10.

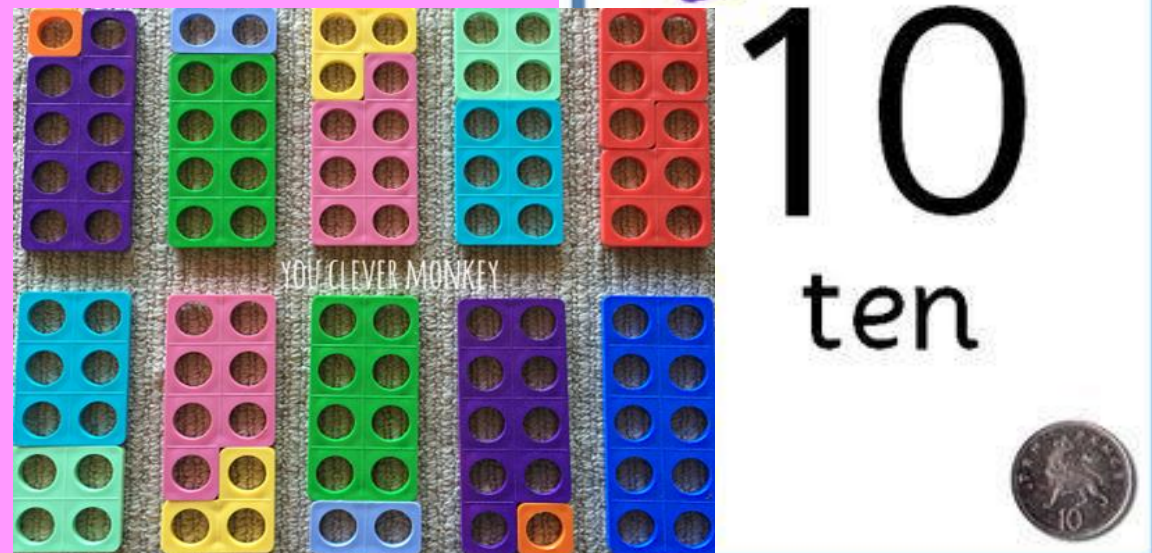
What do you notice? How many ones? How many tens?



Now draw the number 17. Again, how many ones and how many tens?

Addition and subtraction

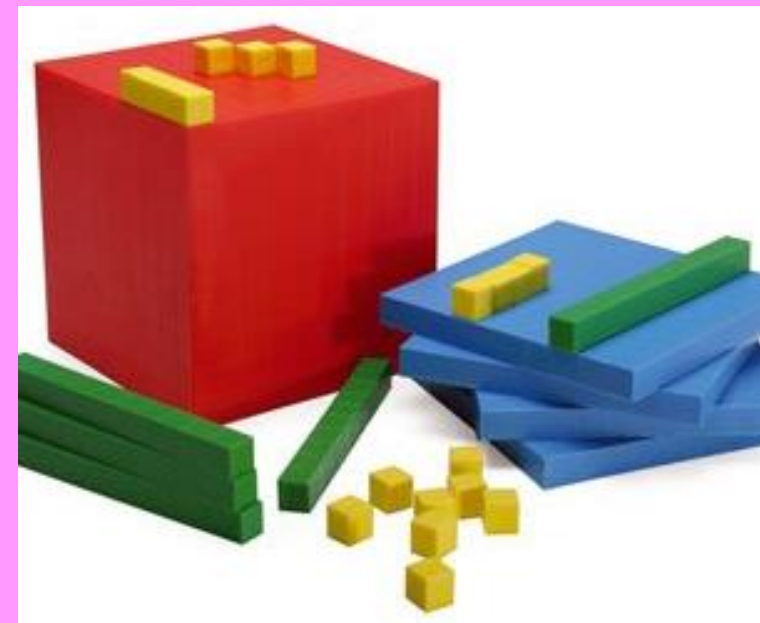
- Number bonds to 10.
- Lets use Numicon. How many different ways can you make 10?
- How else could we make it practical?



$$15 + 12 =$$

Now we can start to apply what we have learnt before.

Make the numbers using Base 10 and lay out underneath each other using tens and ones columns. Then add.

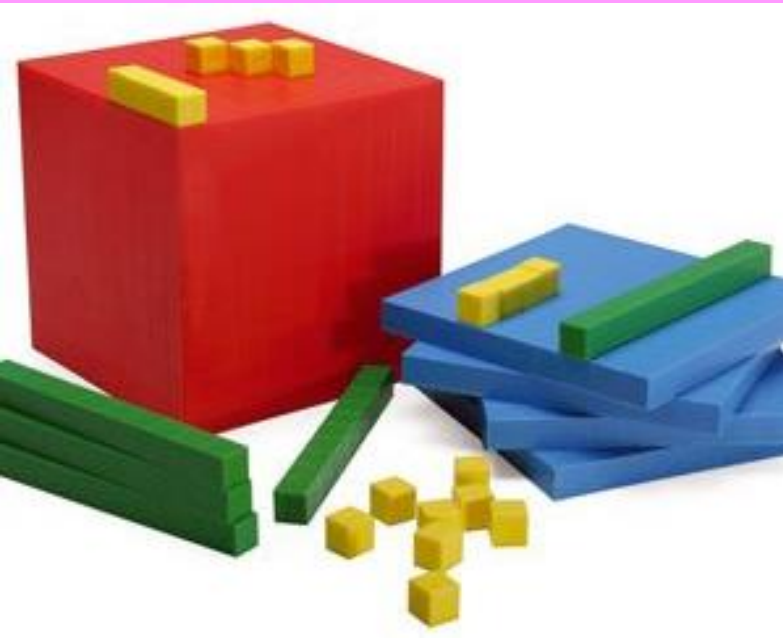


$$\text{Now lets add } 17 + 34 =$$

$$25 - 13 =$$

This time we're subtracting. Make the larger number. Take the smaller number away from it.

$$54 - 28 =$$



Multiplication and division

Show me using any resources:

$$4 \times 2 =$$

We call this 4 lots of 2.

Or 4 groups of 2.

Multiplication and division



How many sausages are there?

Let's Learn

1 1 stick has 2 sausages.



1 group of 2
 $1 \times 2 = 2$



2 groups of 2
 $2 \times 2 = 4$



3 groups of 2
 $3 \times 2 = 6$

There are 6 sausages altogether.



$1 \times 2 = 2$

$2 \times 2 = 4$

$3 \times 2 = 6$

$4 \times 2 = 8$

$5 \times 2 = 10$

$6 \times 2 = 12$

$7 \times 2 = 14$

$8 \times 2 = 16$

$9 \times 2 = 18$

$10 \times 2 = 20$



What do you notice when you add one more group of 2?



Complete the multiplication equations.

(a)



$$\square \times \square = \square$$

(b)



$$\square \times \square = \square$$

$1 \times 2 = \square$

$2 \times 2 = \square$

$3 \times 2 = \square$

$4 \times 2 = \square$

$5 \times 2 = \square$

$6 \times 2 = \square$

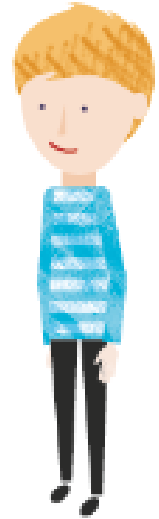
$7 \times 2 = \square$

$8 \times 2 = \square$

$9 \times 2 = \square$

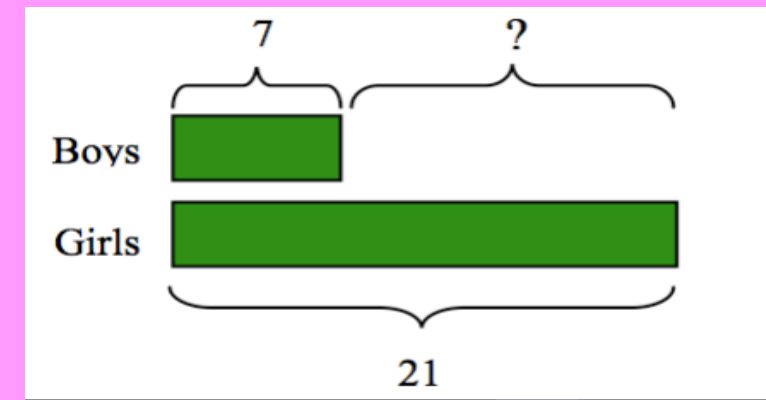
$10 \times 2 = \square$

Use  and  if necessary.

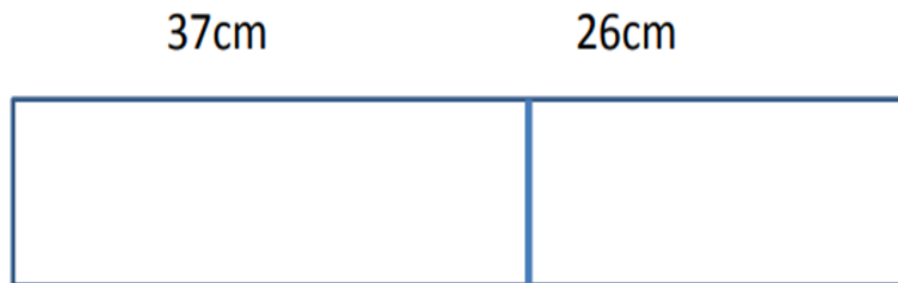


We would then move on to our own drawings – arrays

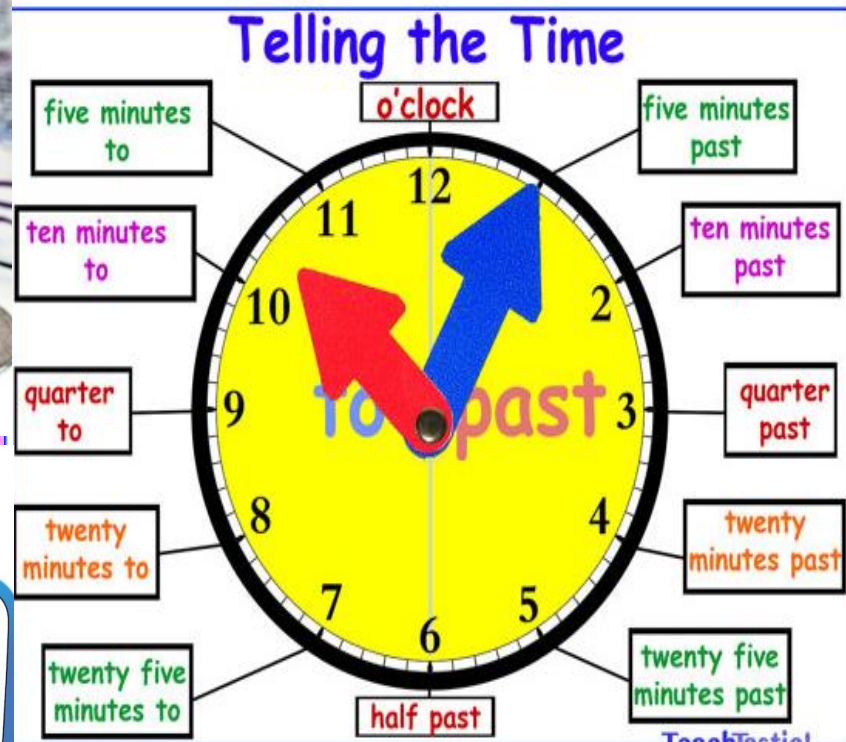
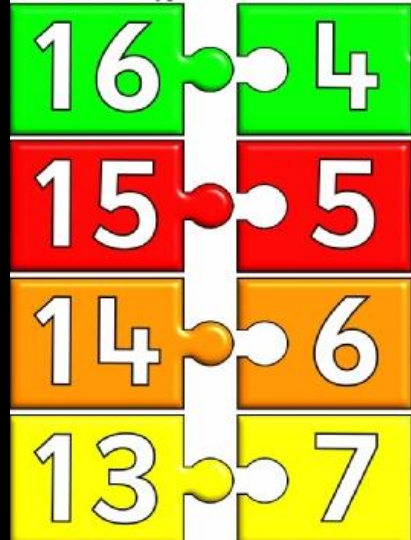
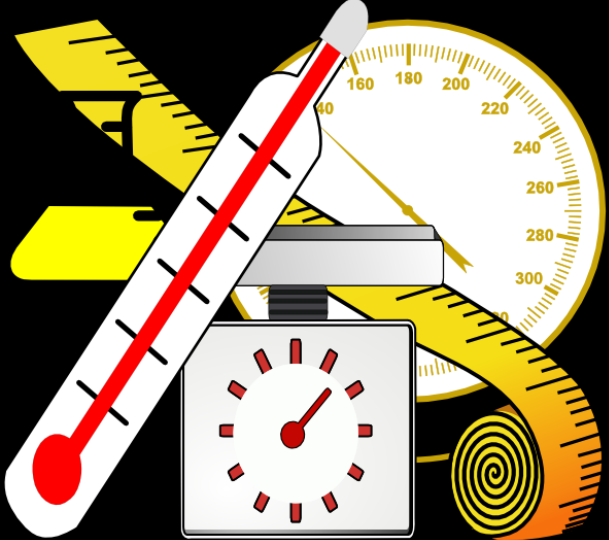
Bar models



After using 37cm of ribbon, Holly had 26cm left. How much ribbon did Holly have to start with?



Bar models don't solve a problem or equation, they show a strategy and a way in which a problem can be solved.



Helping at home...

REAL-LIFE MATHS

Multiplication table

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



2/8 of a pizza



1/4 of a pizza



Activity

In Focus

Hannah has 24 crayons.
Charles has 7 crayons.




How many crayons do they have altogether?

How can we
find out?

Let's learn

In Focus

Hannah has 24 crayons.
Charles has 7 crayons.



How many crayons do they have altogether?

How can we find out?

What different ways are there to solve this problem?
How can we check we are correct?

Further challenge:

Hannah and Charles double the number of crayons they have. How many do they have altogether now?
What different ways can we solve this?