Family Learning Numeracy Workshops

P1-3- Concrete, Pictoral, Abstract approach + - x ÷ skills

P4-5- exploding dots + and x

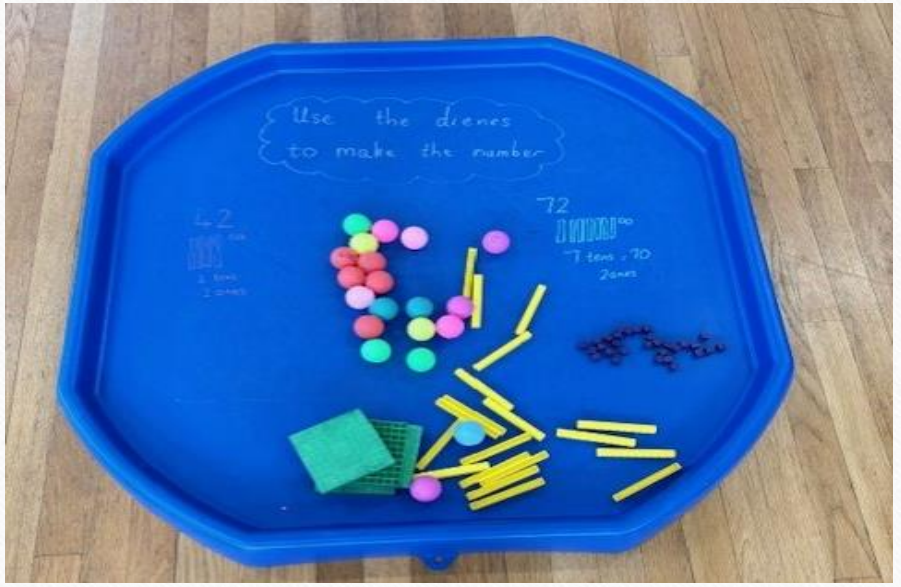
P6-7- rich tasks and problem solving

- Here are some examples of the activities that we did during the Family Learning Session. Feel free to try some of these.

- A huge thank you to all of the people who attended this event and those who gave us feedback.

Primary 1-3 Session

- Tuff trays

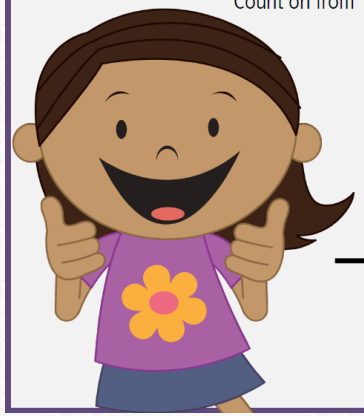


Addition

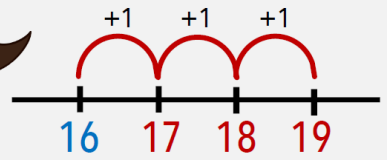
ADDITION STRATEGY

Count On

Count on from the larger addend.



16 + 3



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ADDITION STRATEGY

Make Friendly Numbers

1st 2nd

Make a friendly number by decomposing another addend.

18 + 6

2 4

18 + 2 = 20

20 + 4 = 24

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ADDITION STRATEGY

Place Value

1st 2nd

Decompose and add by the place value.

21 + 14

20 1 10 4

20 + 10 = 30

1 + 4 = 5

30 + 5 = 35

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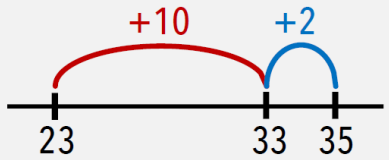
ADDITION STRATEGY

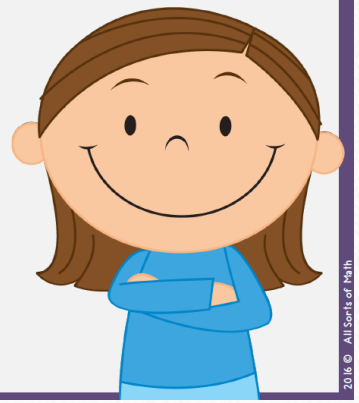
Add Up in Chunks

1st 2nd

Keeping one addend whole, add the second addend in friendly chunks.

23 + 12





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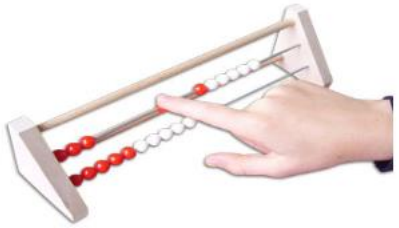
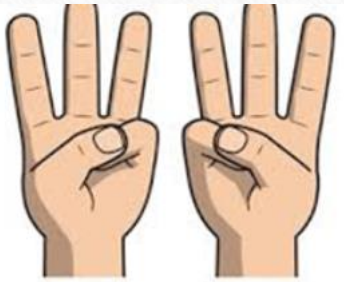
Our addition strategies and tools

I used Numicons.



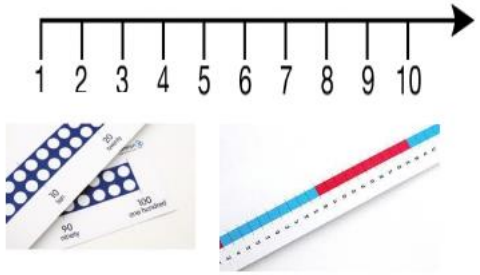
I used a rekenrek.

I used counters.



I used fingers.

I drew objects to represent numbers.

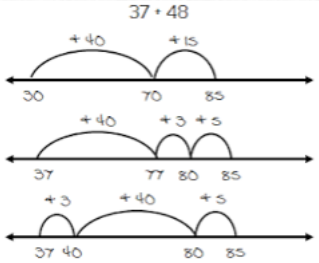


I used a number line.

11, 12, 13, 14…

25, 24, 23, 22

I counted on/back in my head.



I used an empty number line.

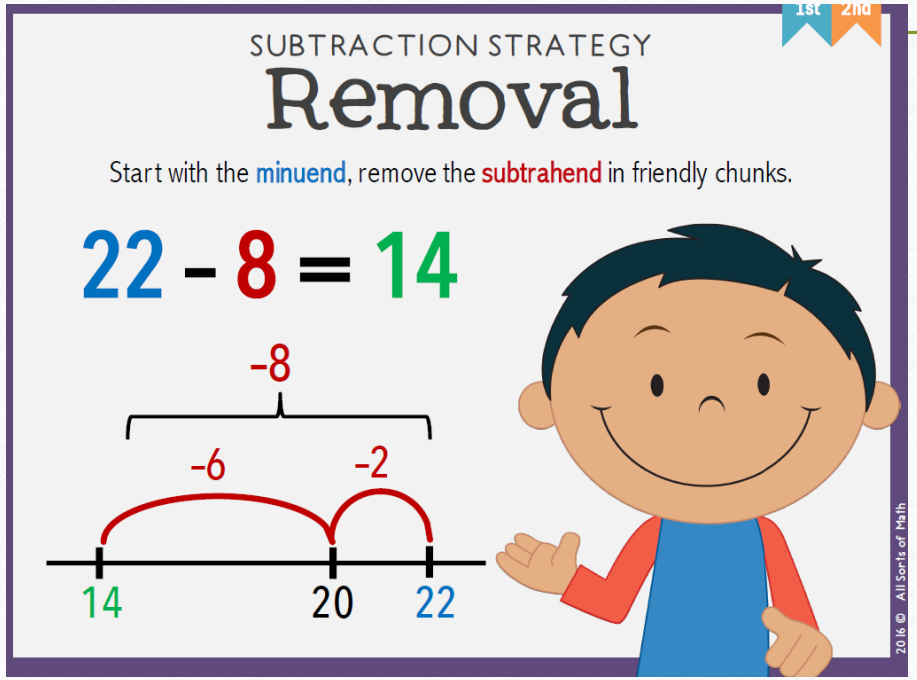
Addition Activities

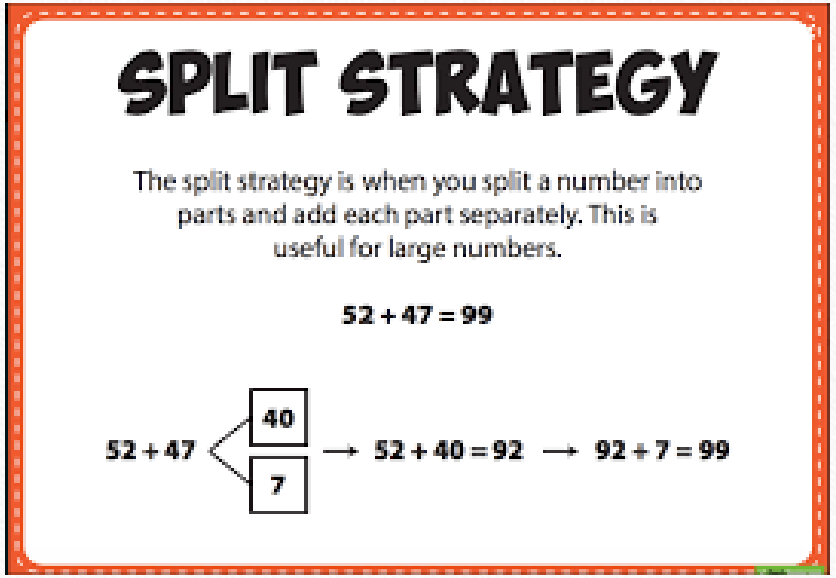
Activity 1- Put out some red counters then use the covers to cover them over. Put out some yellow counters. How many are there altogether?

Challenge- make this activity harder by covering both groups of counters. How many are there?

Subtraction

Partitioning or splitting up a number

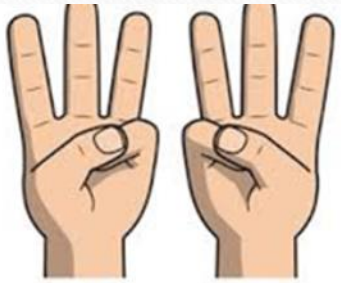




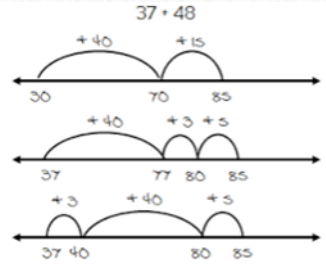
Our subtraction strategies and tools

I used Numicons.

I used counters.

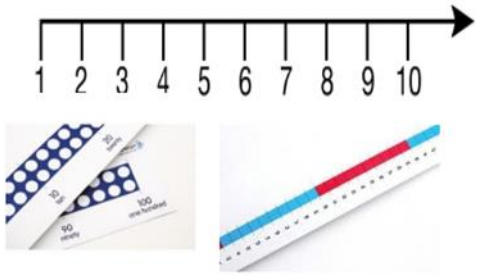


I used fingers.



I used an empty number line.

I drew objects to represent numbers.



I used a number line.

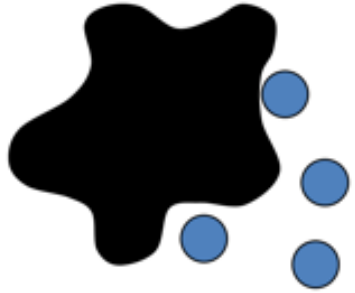
11, 12, 13, 14…

25, 24, 23, 22

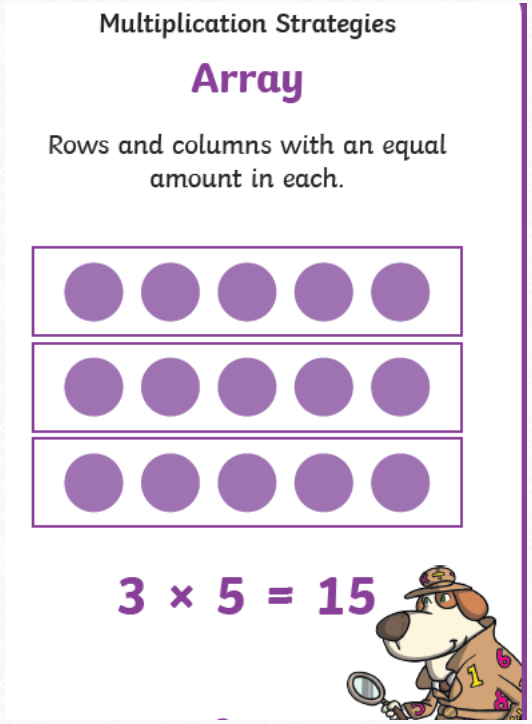
I counted on/back in my head.

Subtraction Activities

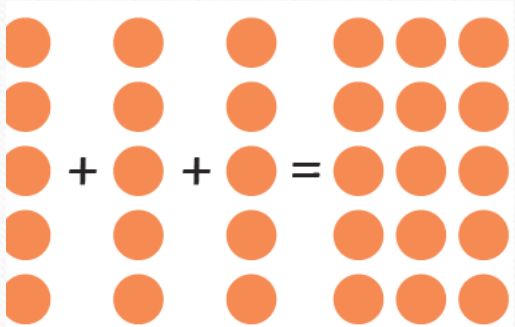
Activity 1- Put out some counters. Splat! Place a splat over the top of some. How many are left? How many are under the splat? Try to write the sum.



Multiplication

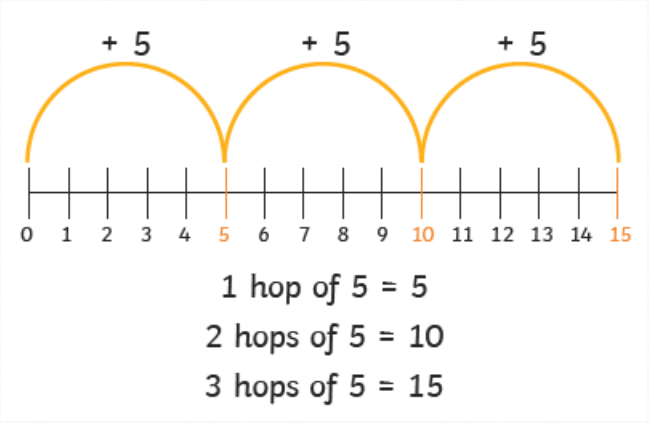


Repeated addition

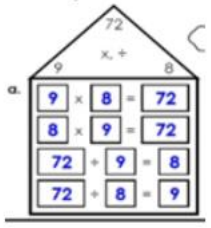


5+5+5 =15

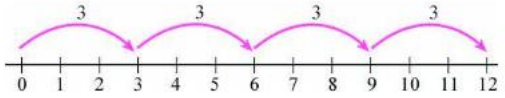
Skip counting



Our multiplication strategies and tools

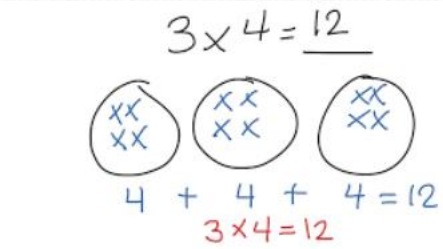


I used fact families.



4 x 3 = 12

I used skip counting on a number line.



I drew groups of items and used repeated addition.

2's- 2,4,6,8,10 ..
5's- 5,10,15...
3's - 3,6,9,12...
10's - 10, 20, 30 ...

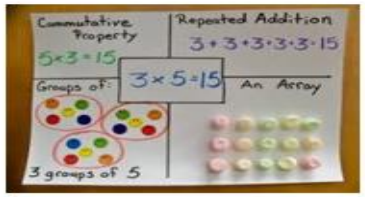
I used skip counting

Multiplication Activities

Activity 1- Practise skip counting

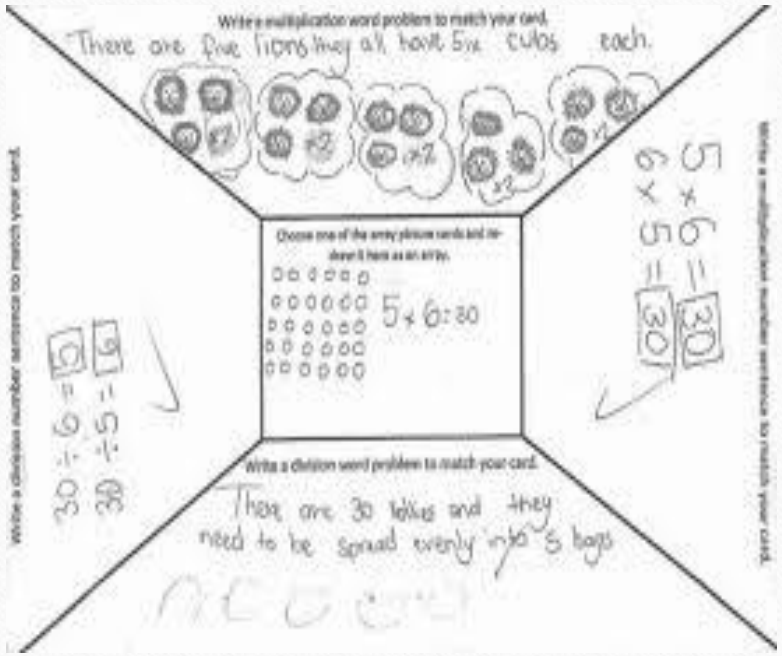
2,4,6,8..... 5, 10, 15,20..... 10,20,30,40.....

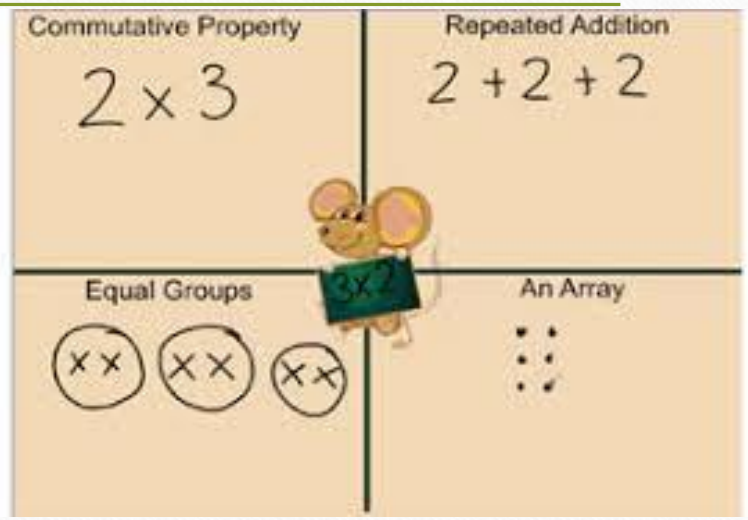
Activity 3- Multiplication Thinkboards. Think of different ways to represent your multiplication



Activity 4- Write a multiplication sum then draw an array to represent the sum.

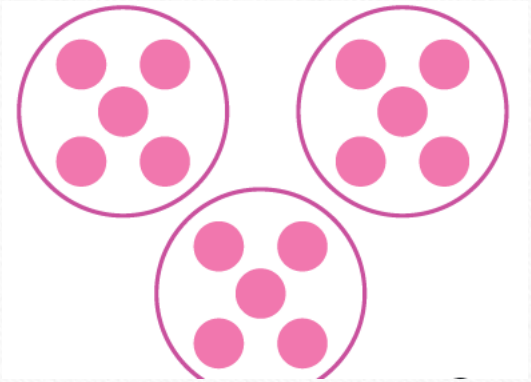
Thinkboards



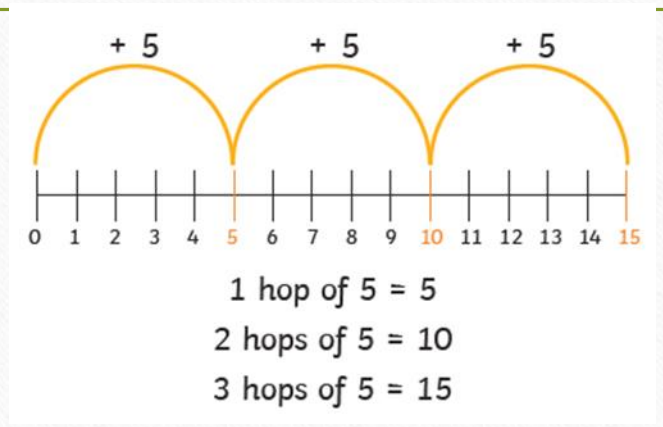


Division

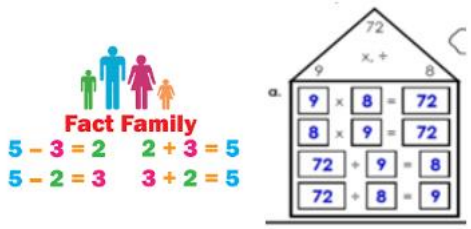
Share equally to divide



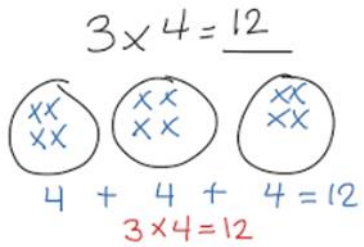
Skip counting



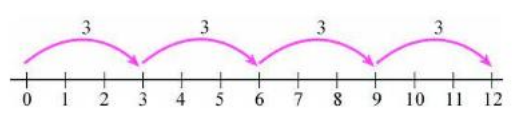
Our division strategies and tools



I used fact families.



I drew groups of items and used repeated addition.



4 x 3 = 12

I used skip counting on a number line.

2's- 2,4,6,8,10 ..
5's- 5,10,15...
3's - 3,6,9,12...
10's - 10, 20, 30 ...

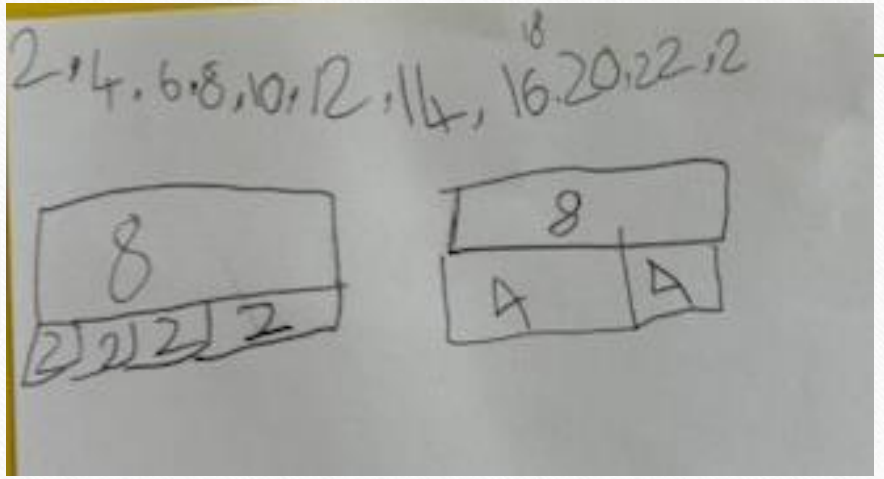
I used skip counting

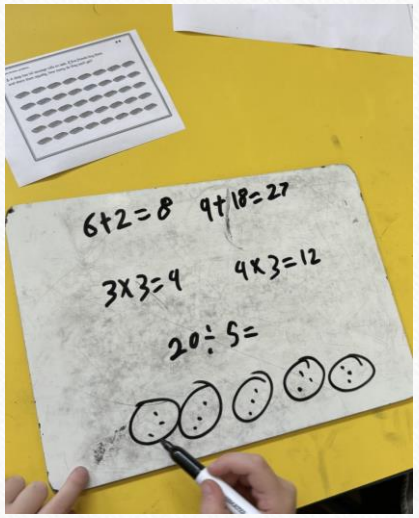
I shared objects into equal groups.

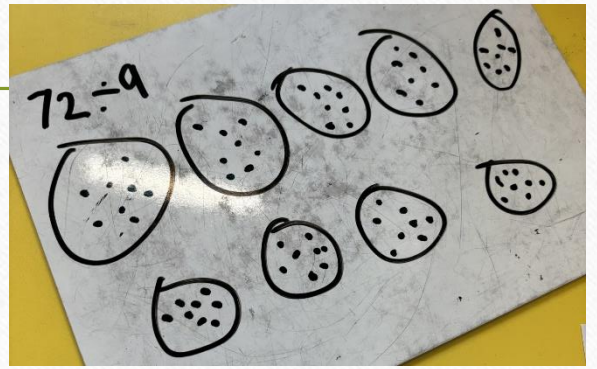
Division Activities

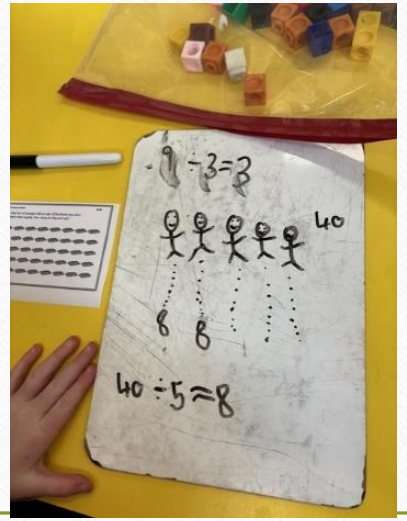
Activity 1- Put out some cakes then try to share them equally between the plates. Try to write the division sum to match.

Pictures of family learning

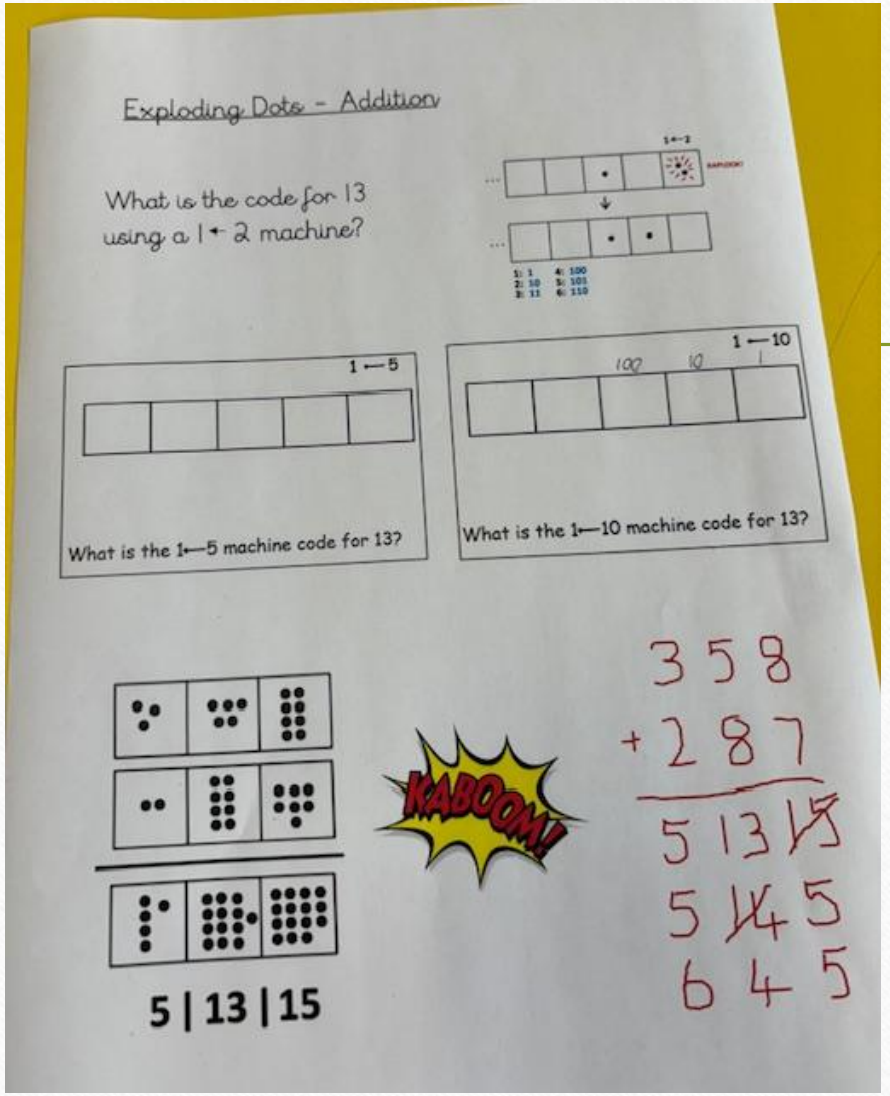


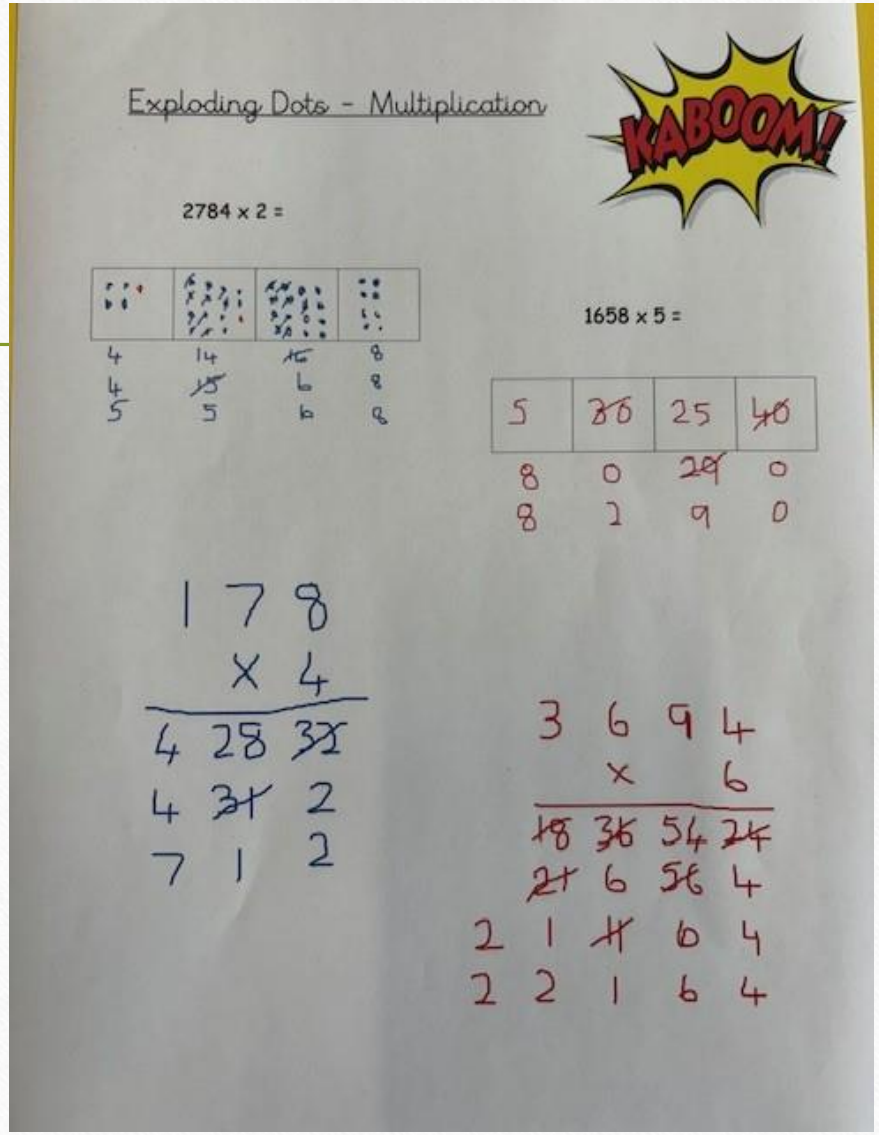




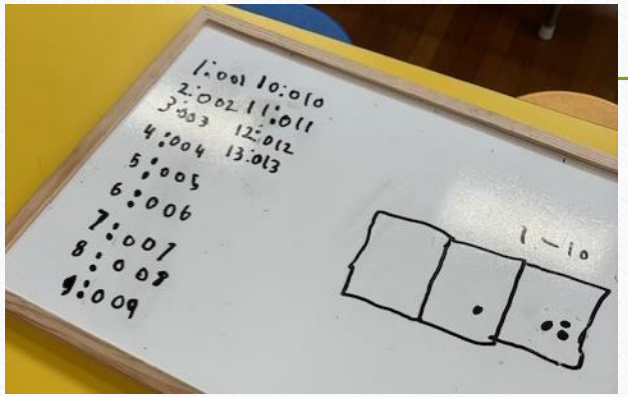


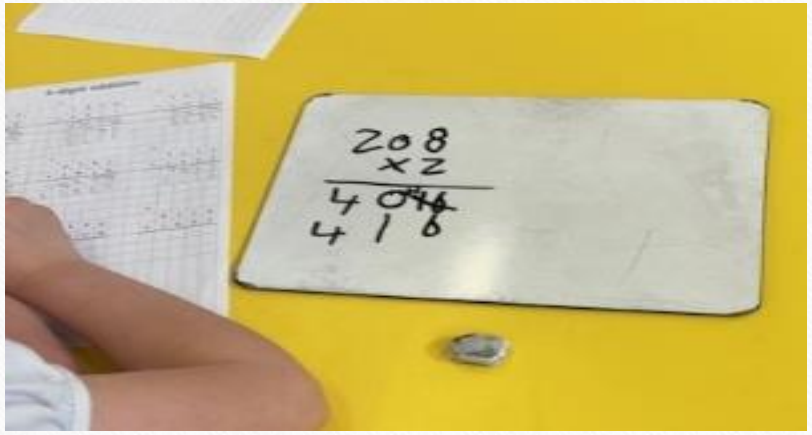
P4-5

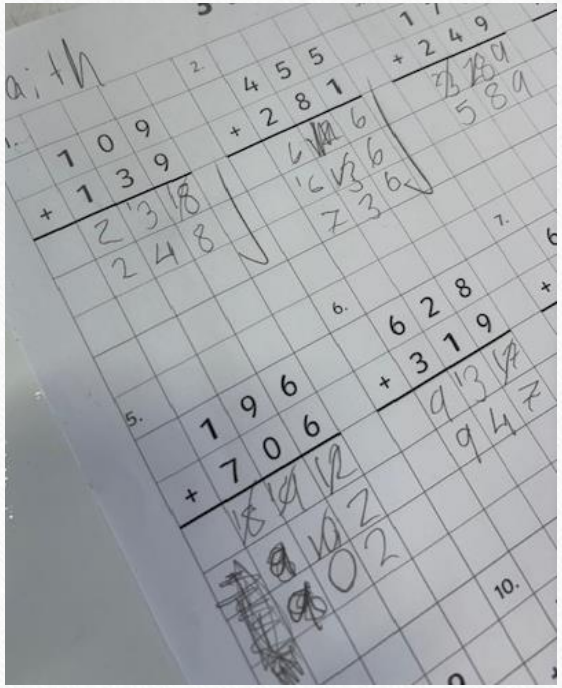

Exploding Dots - Addition
What is the code for 13 using a 1 ← 2 machine?
1 ← 5
What is the 1←5 machine code for 13?
1 ← 10
What is the 1←10 machine code for 13?
5 | 13 | 15
KABOOM!
358
+287
645

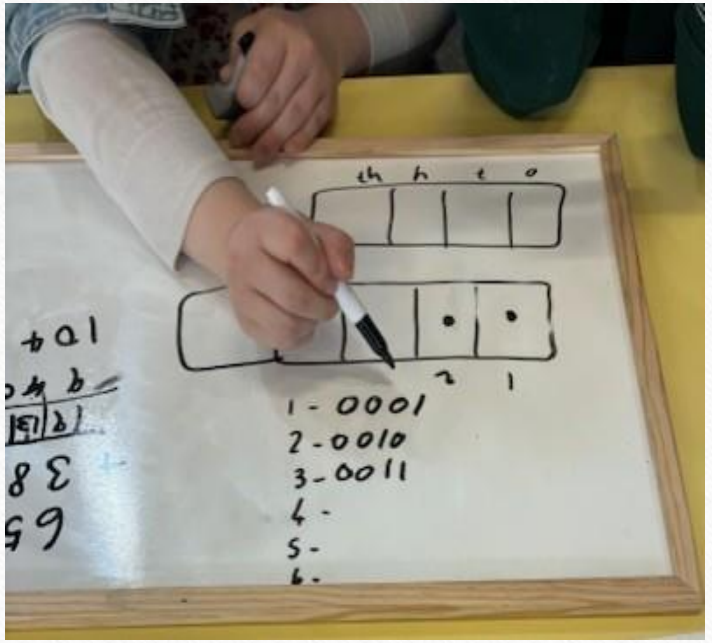

Exploding Dots - Multiplication
KABOOM!
2784 x 2 =
1658 x 5 =
178
x 4
3694
x 6

Pictures of family learning

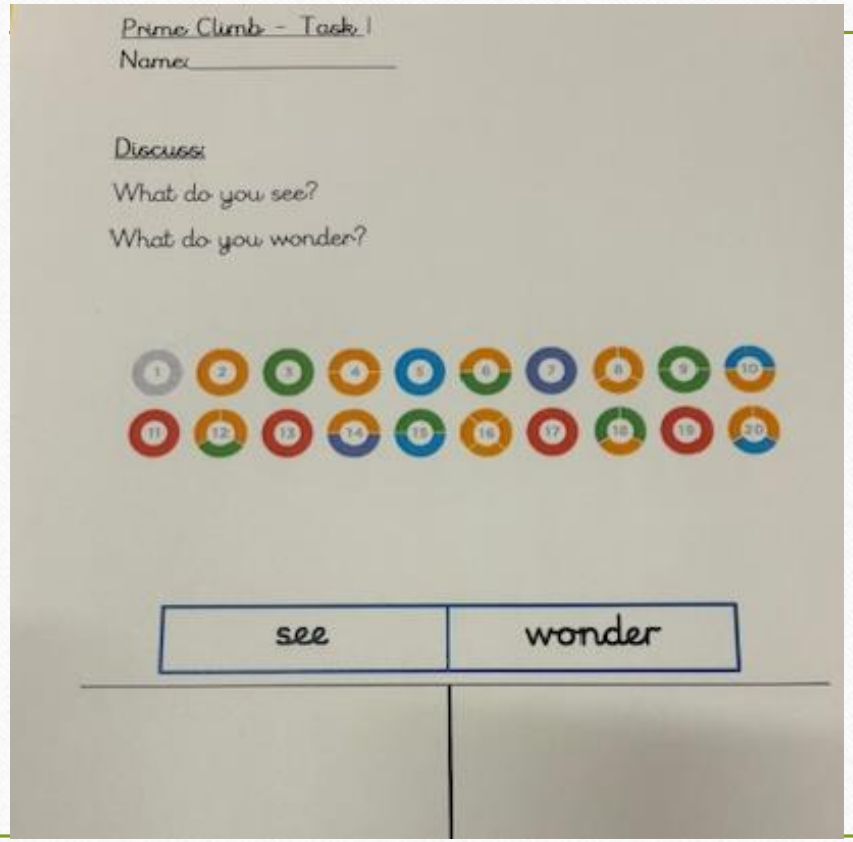


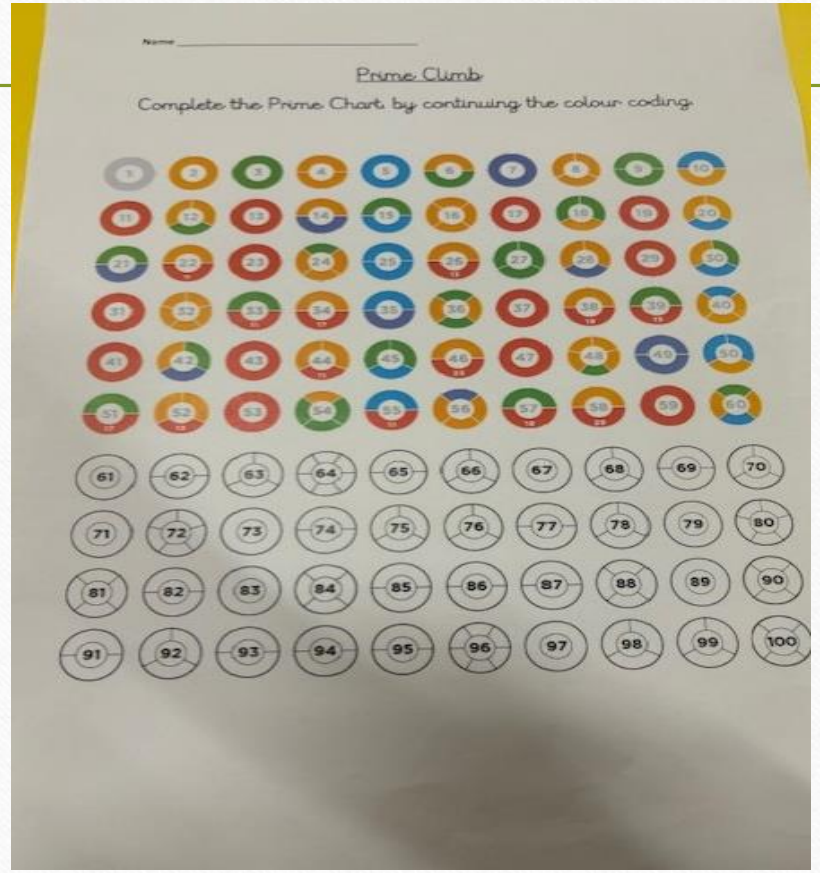




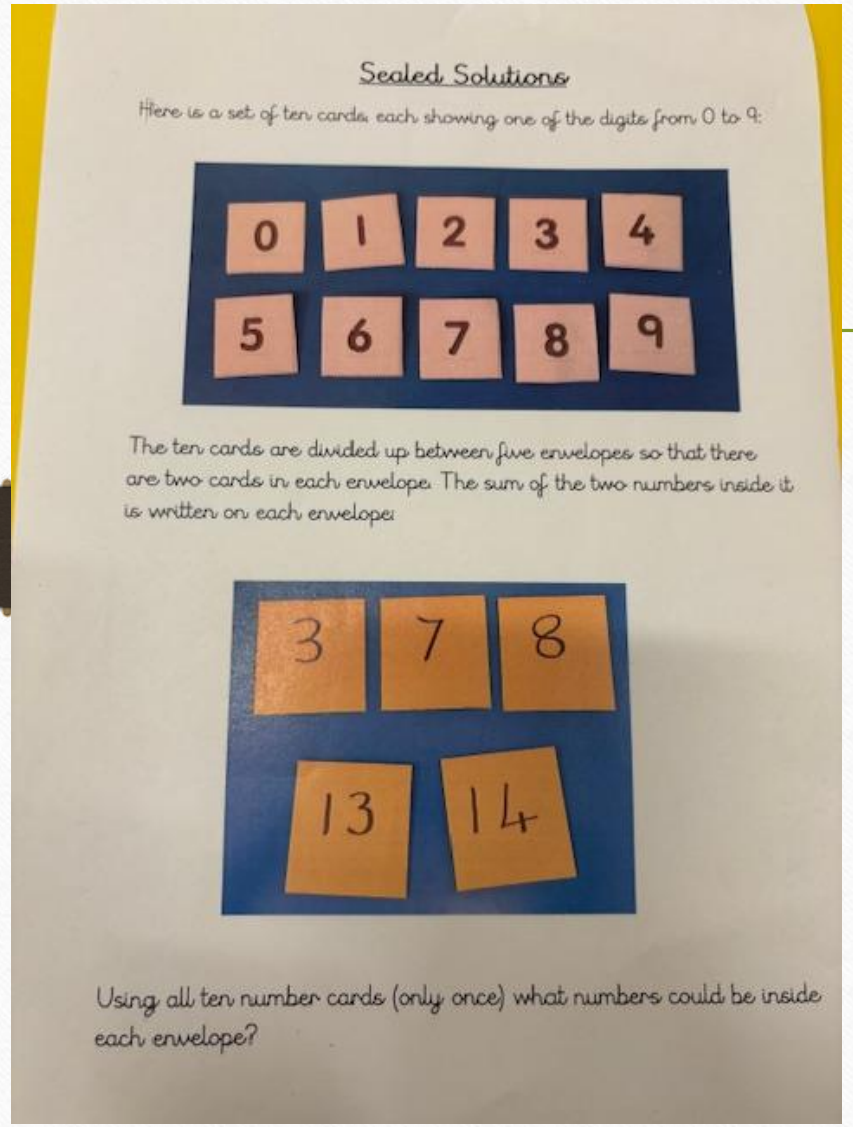


P6-7 Activities





P6-7 Activities



Sealed Solutions

Here is a set of ten cards, each showing one of the digits from 0 to 9:

0 1 2 3 4

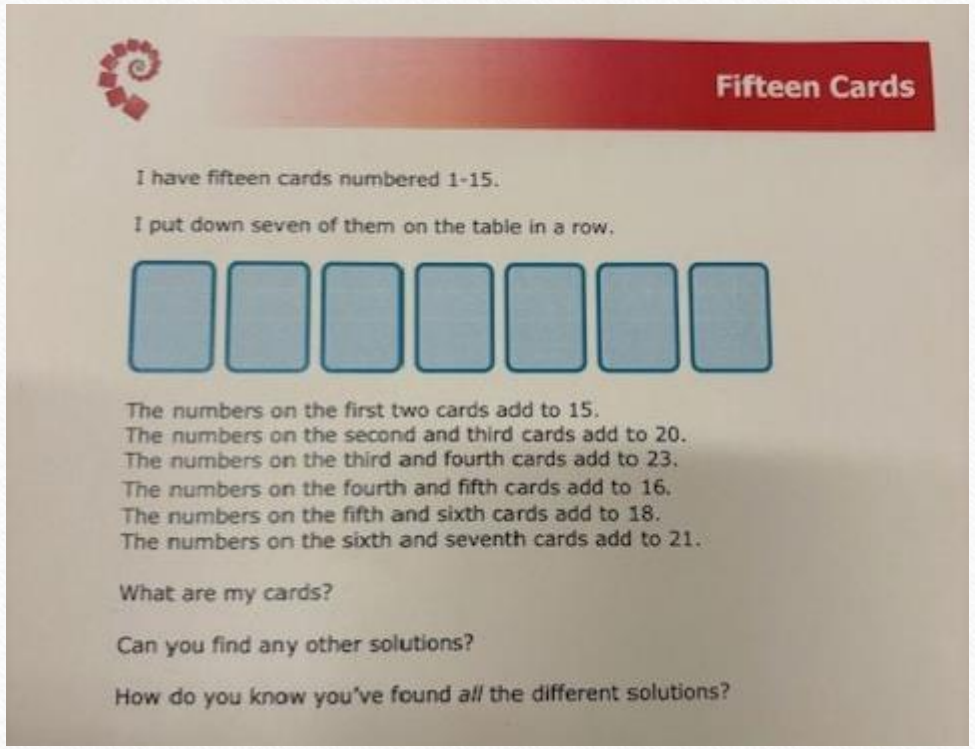
5 6 7 8 9

The ten cards are divided up between five envelopes so that there are two cards in each envelope. The sum of the two numbers inside it is written on each envelope:

3 7 8

13 14

Using all ten number cards (only once) what numbers could be inside each envelope?



Fifteen Cards

I have fifteen cards numbered 1-15.

I put down seven of them on the table in a row.

The numbers on the first two cards add to 15.
The numbers on the second and third cards add to 20.
The numbers on the third and fourth cards add to 23.
The numbers on the fourth and fifth cards add to 16.
The numbers on the fifth and sixth cards add to 18.
The numbers on the sixth and seventh cards add to 21.

What are my cards?

Can you find any other solutions?

How do you know you've found *all* the different solutions?

Number Palindromes

What do you notice?

Hannah bib deified dad civic level radar repaper madam Anna rotavator noon

Numbers can be palindromes too

88 313 110011 292 464 7997 5885

THINK PAIR SHARE

To work out how many steps it takes to find out if a number is a palindrome read the information below carefully.

Take the number 24.
Reverse it. 42
Add the two numbers together
It comes to 66.
A 1-step palindrome

1-step palindrome

24 + 42 = 66

Take the number 37.
Reverse it. - 73
Add the two numbers together - 110
Reverse it again - 011.
Add the two numbers together
It comes to 121.
A 2-step palindrome
It was added twice before it was a palindrome.

2-step palindrome

37 + 73 = 110
110 + 011 = 121

Name: _____

Number Palindromes

colour palindromes red
colour 1-step palindromes blue
colour 2-step palindromes green
colour 3-step palindromes yellow
colour 4-step palindromes purple
colour 5-step palindromes pink
colour 6-step palindromes orange
Is that everything?

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

Pictures of family learning

Feedback

I like to see all of the tools and strategies the children have available to them. It helps when working on maths at home.

Thank you for arranging this event, it's great to be able to come in to school and share some of my child's learning

I enjoyed the challenge of the tasks and seeing my daughters delight in teaching me how to do something she knows.

Was good to have exploding dots explained as not something iv used

Spending time with my child being shown their learning and them teaching me

Learning new techniques in numeracy being taught by my child which will in turn help when they need support with their homework etc

Website Links

- Sumdog- https://play.sumdog.com/domain_choice
- Topmarks- https://www.topmarks.co.uk/maths-games/5-7-years/counting
- MathsBot- https://mathsbot.com/manipulativeMenu
- Love Maths- https://www.lovemaths.me/games
- Maths Frame- https://mathsframe.co.uk/en/resources/category/22/most-popular