



P.2 MULTIPLICATION



八鄉中心小學
Pat Heung Central Primary School

BACKGROUND

- Three classes of P.2, ~21 students each
- Half of them are non-Chinese, mainly Nepalis and Pakistanis
- EMI
- Huge learners' diversity (some students memorised the times table in P.1 but a few students are still struggling with addition with carry)
- Zoom lessons @ 20min
- 5 weeks for multiplication



SOME OBSERVATIONS

- P.3-P.6 students can “sometimes” remember the times table
 - When they don’t, they add from the beginning
 - When they do division, they write down the times table of the divisor
- They like

COLOURS

DRAWING

SINGING

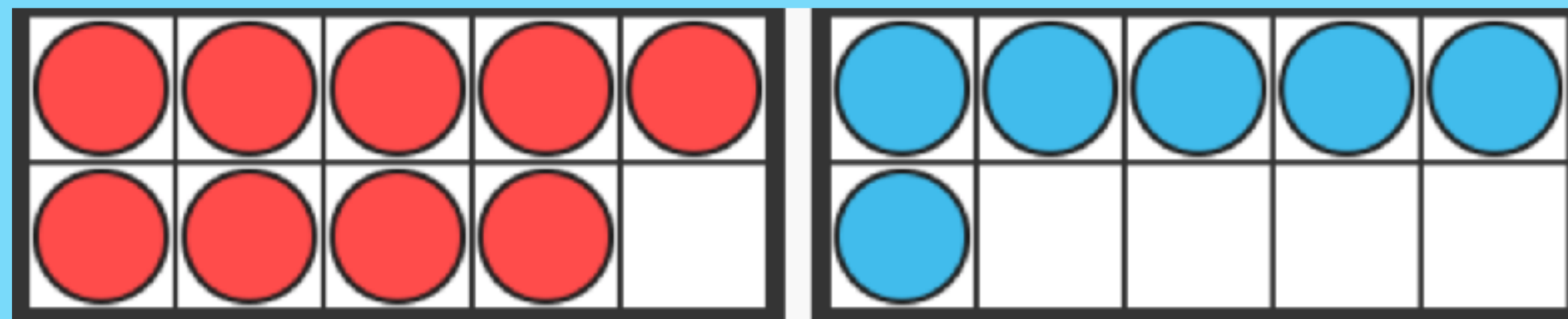
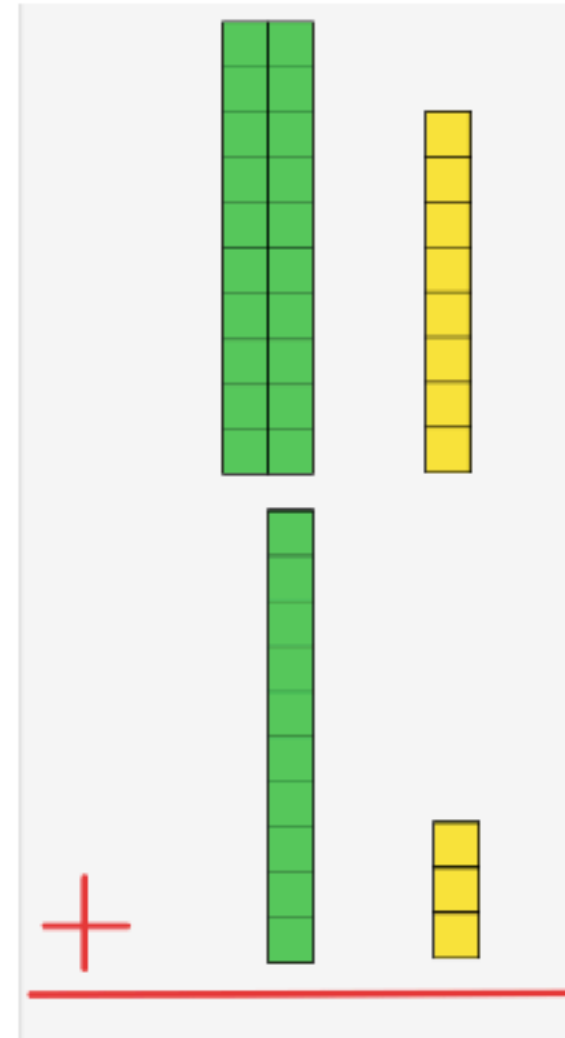
TALKING

PLAYING

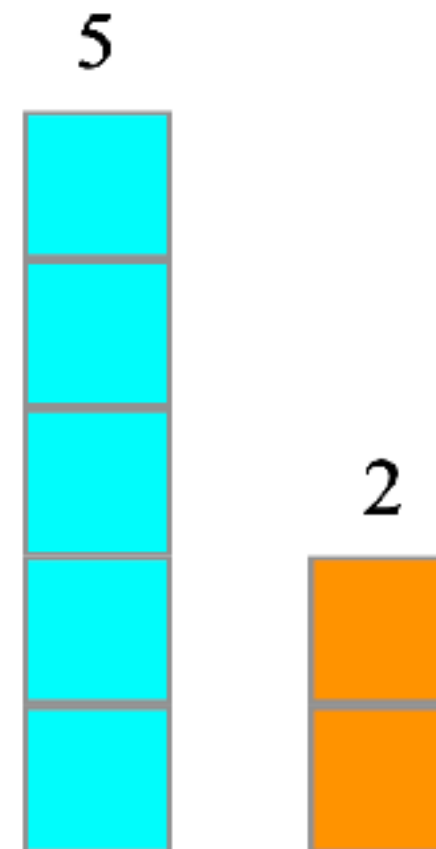


THEY LIKED THESE IN P1

$$\begin{array}{r} 28 \\ + 13 \\ \hline \\ \hline \end{array}$$



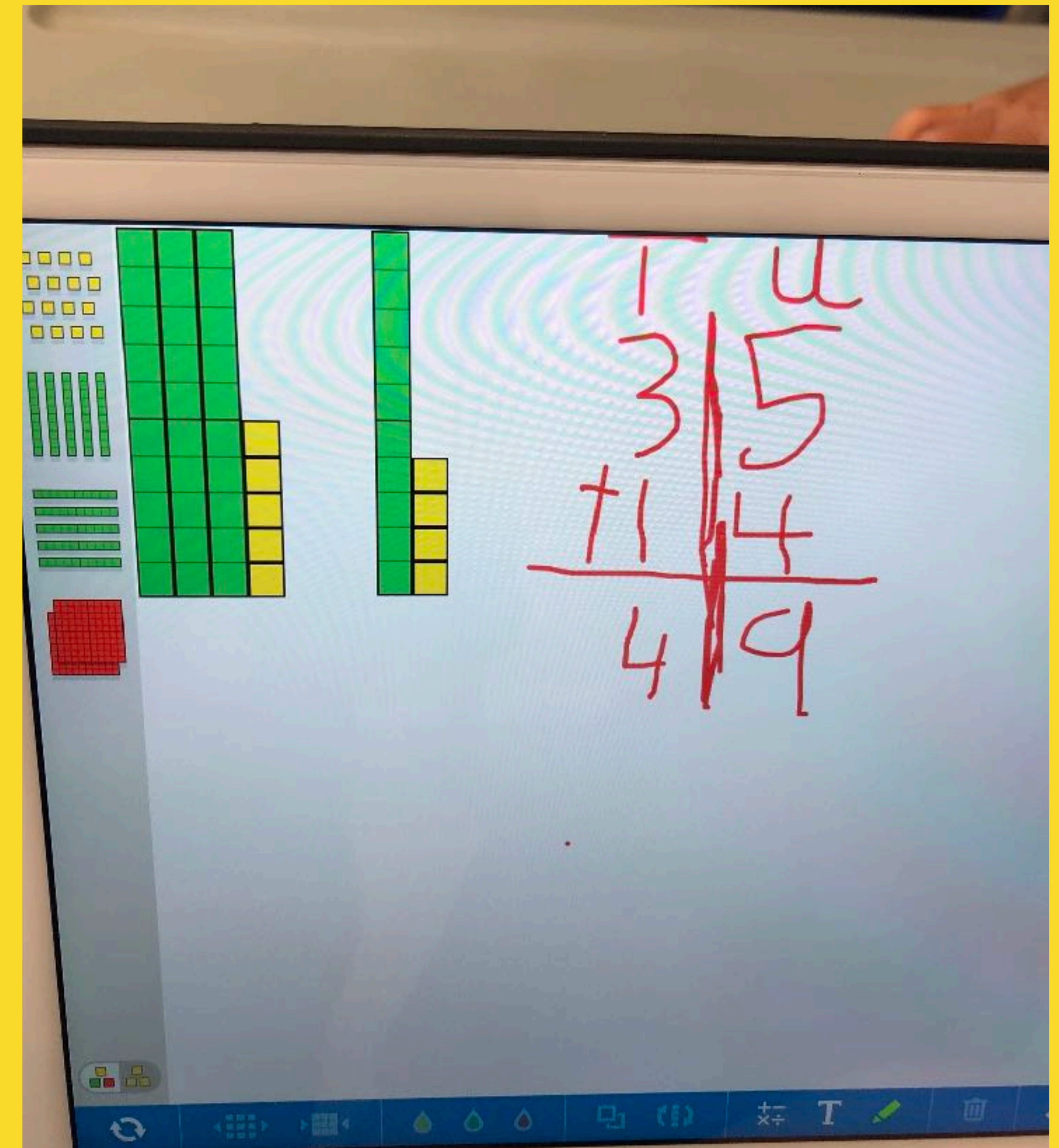
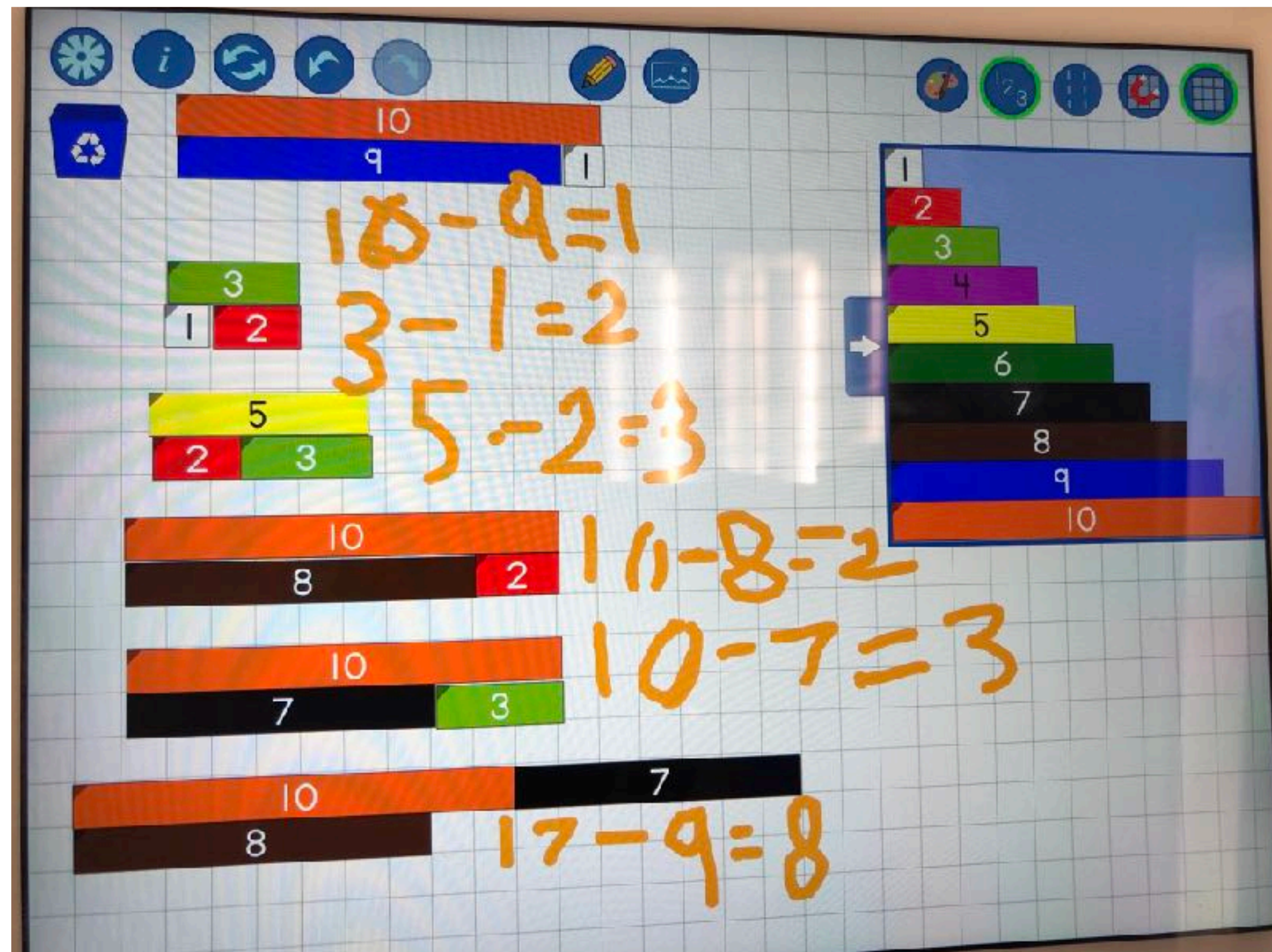
$$\begin{array}{l} 9 + 4 \\ = 10 + \underline{\quad} \\ = \underline{\quad} \end{array}$$



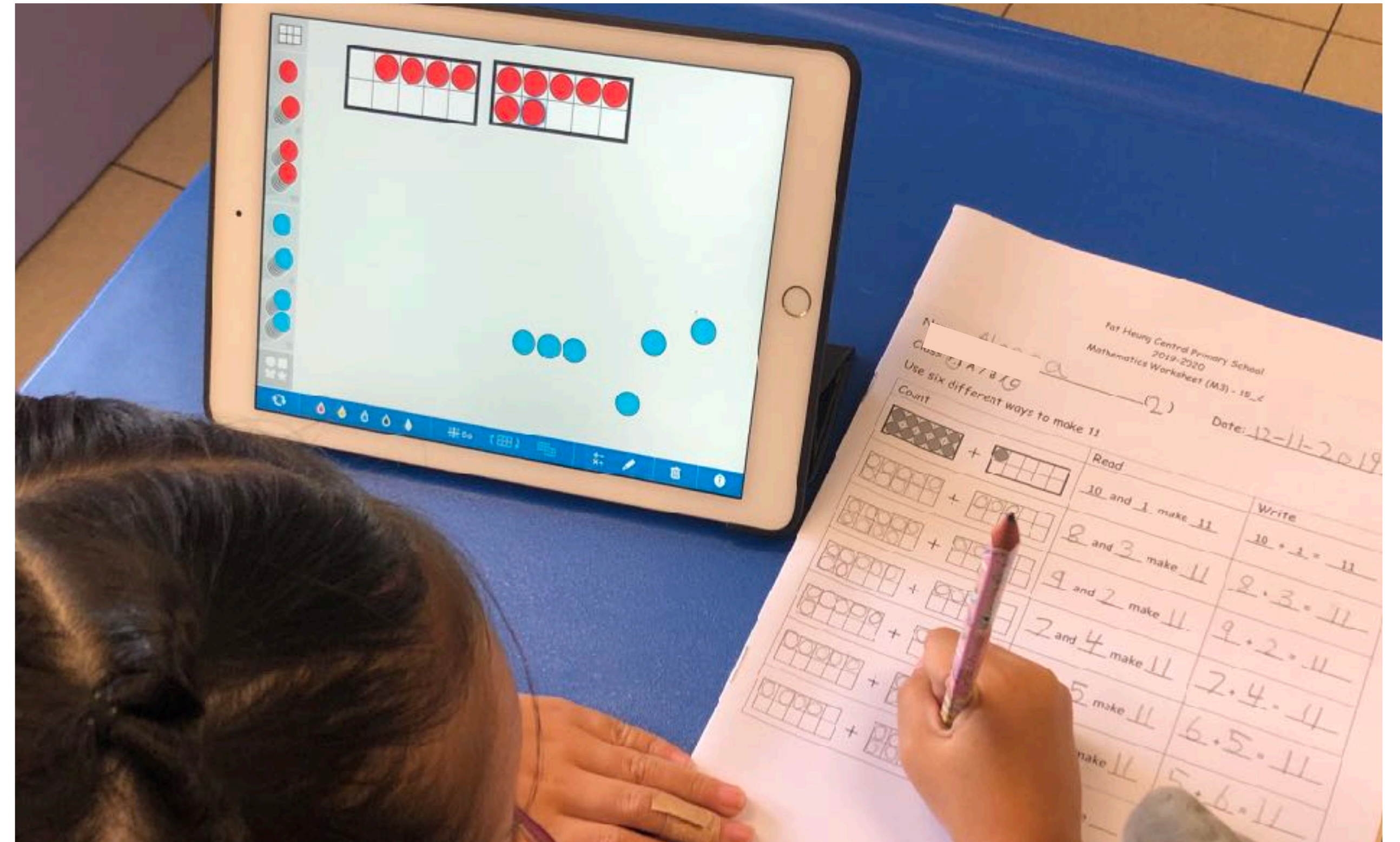
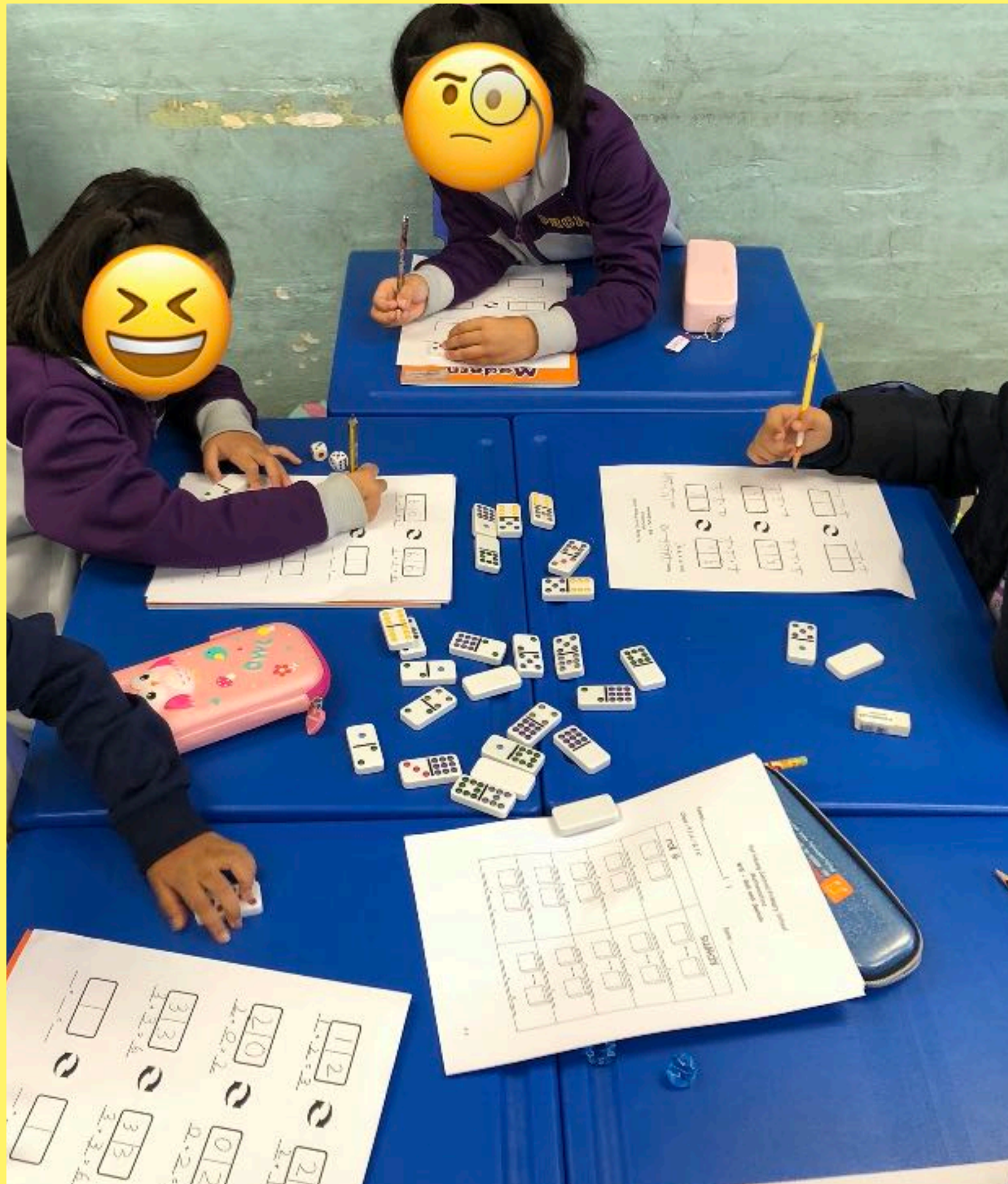
The difference is

$$5 - \underline{\quad}$$

WHEN THEY WERE P1



WHEN THEY WERE P1

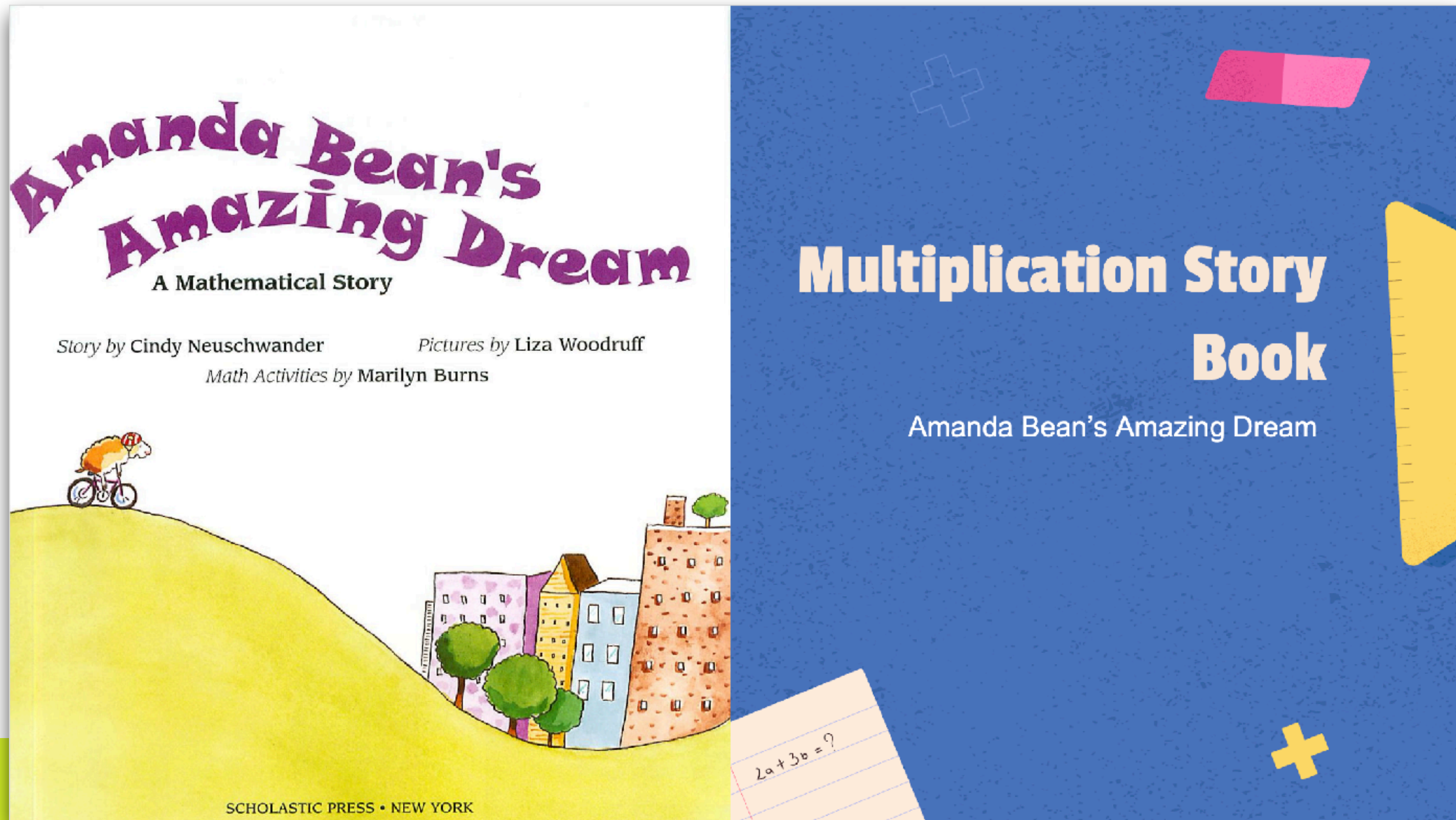


WHAT WE ARE TRYING
NOW




INTRO TO THE TOPIC

— Story Book



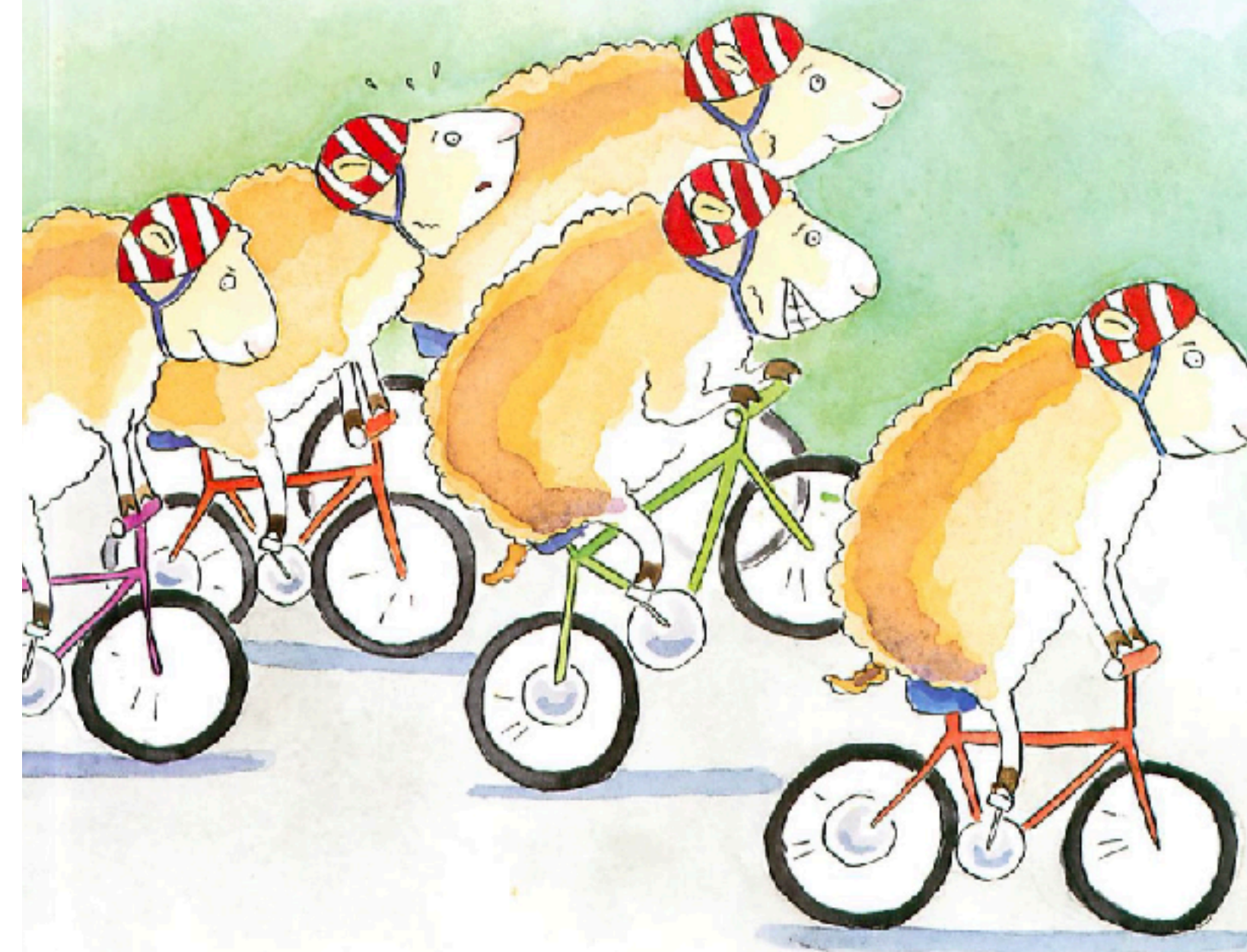
HOW MANY GROUPS? HOW MANY IN ONE GROUPS?



Then I notice something. It looks like  bicycles with sheep on them.

"How many wheels is that?" I wonder. I start counting, but the sheep whiz by so fast, I cannot count all the bicycle wheels.

"Wait!" I yell. "I am Amanda Bean and I count anything and everything!"



WHAT THEY LIKE - FOOD

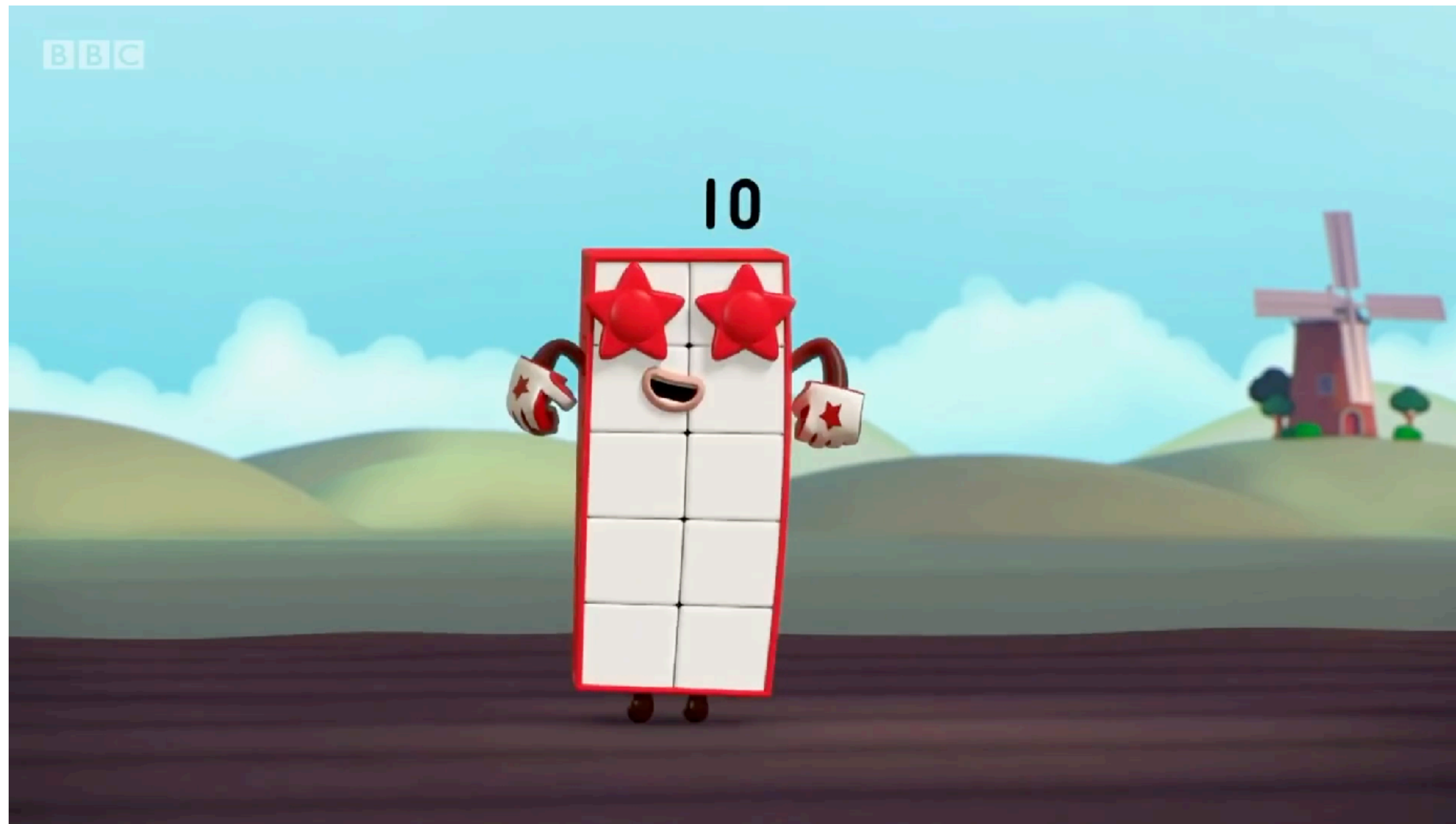


Momo



Siu Mai

WHAT THEY LIKE - BBC'S NUMBEBLOCKS

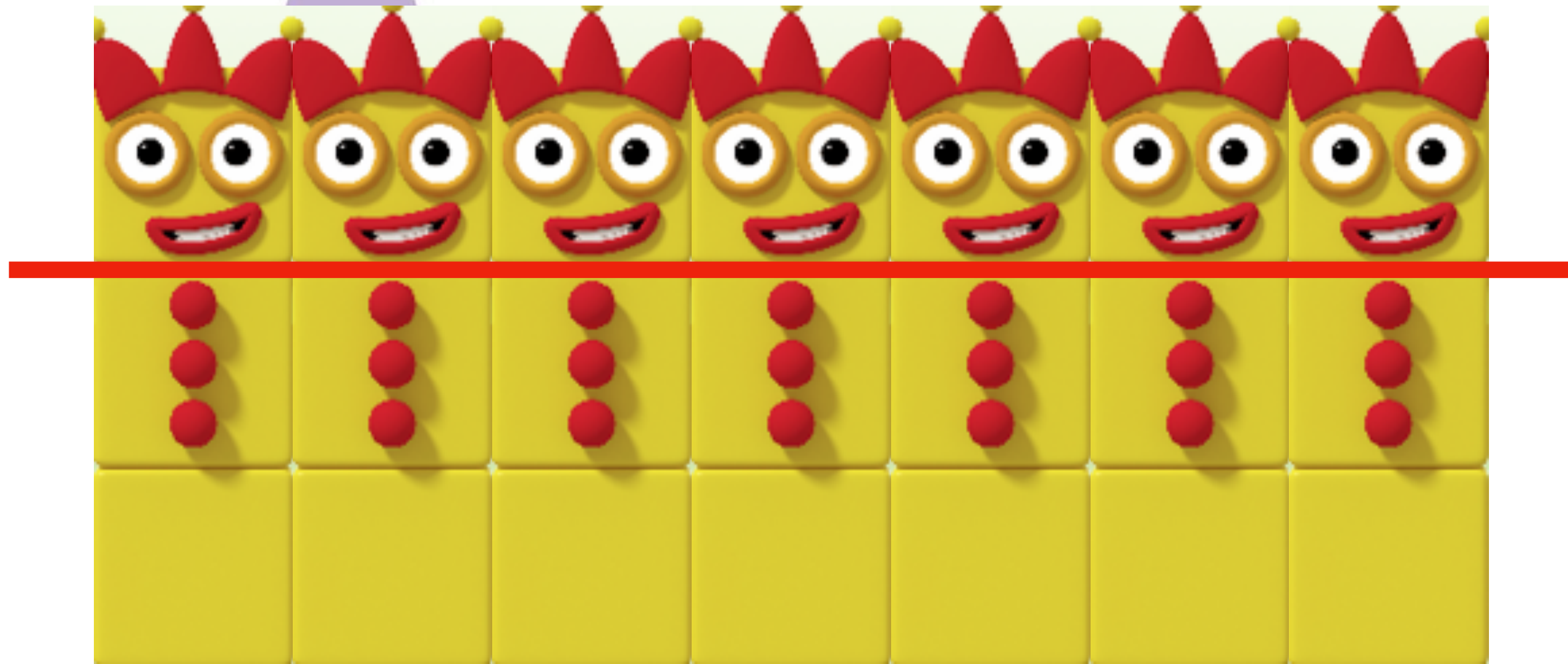


<https://www.youtube.com/watch?v=mWGhmGI0RJQ>



WHO ARE 4'S FRIENDS?

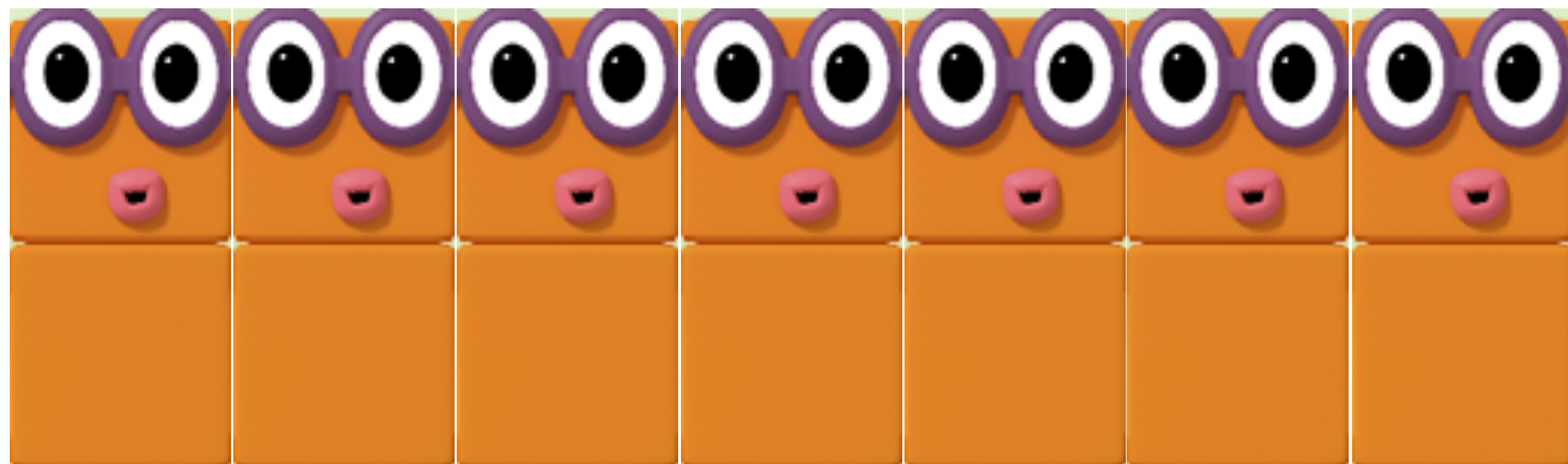
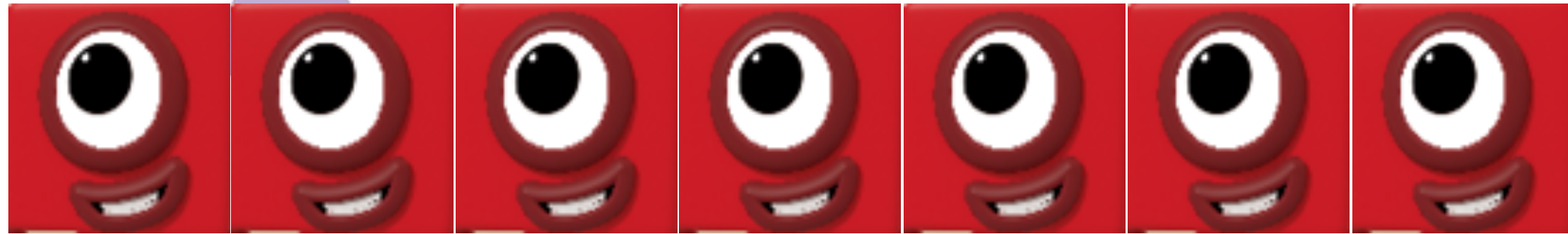




$$7 \times 3$$



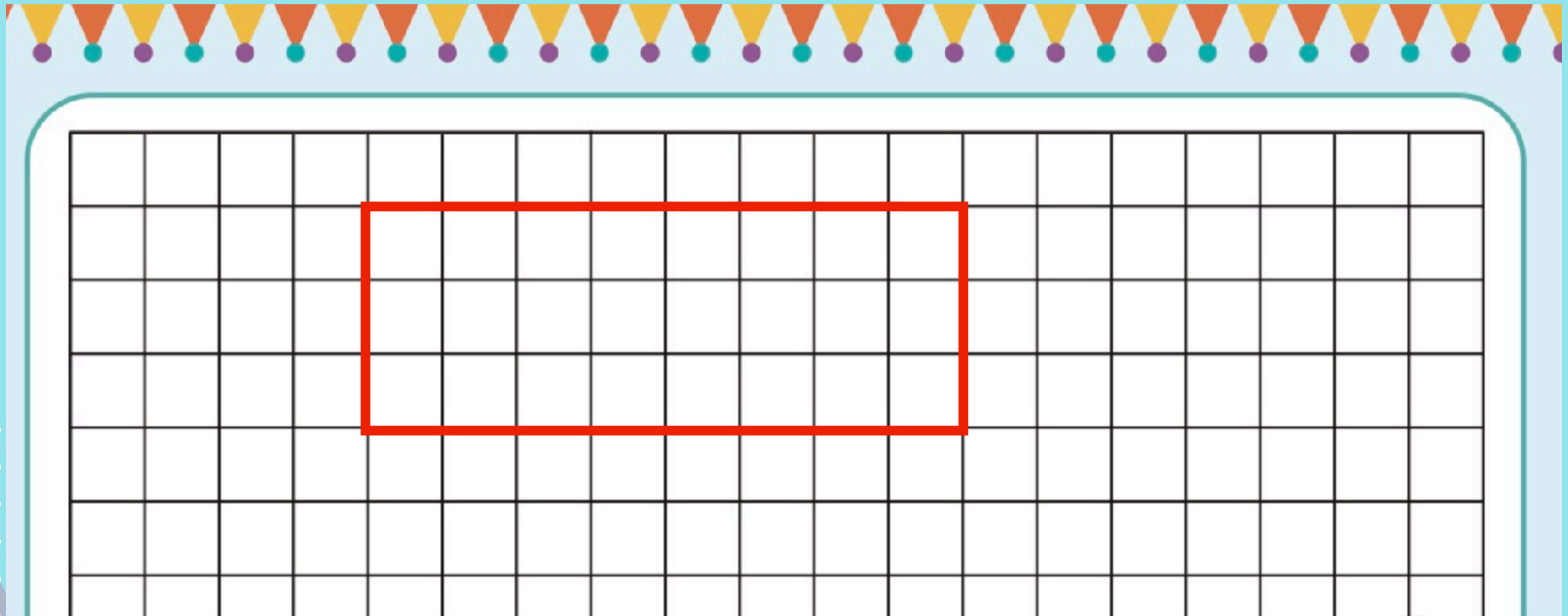
$$7 \times 1$$



$$7 \times 2$$

ARRAY MODEL / C-RODS / NUMBERBLOCKS

$$8 \times 3$$



RELATIONS BETWEEN NUMBERS

$\times 3$	$\times 4$	$\times 7$
3	4	7
6	8	14
9	12	21
12	16	28
15	20	35
18	24	42
21	28	49
24	32	56
27	36	63
30	40	70

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15	20	35
18	24	42
21	28	49
24	32	56
27	36	63
30	40	70

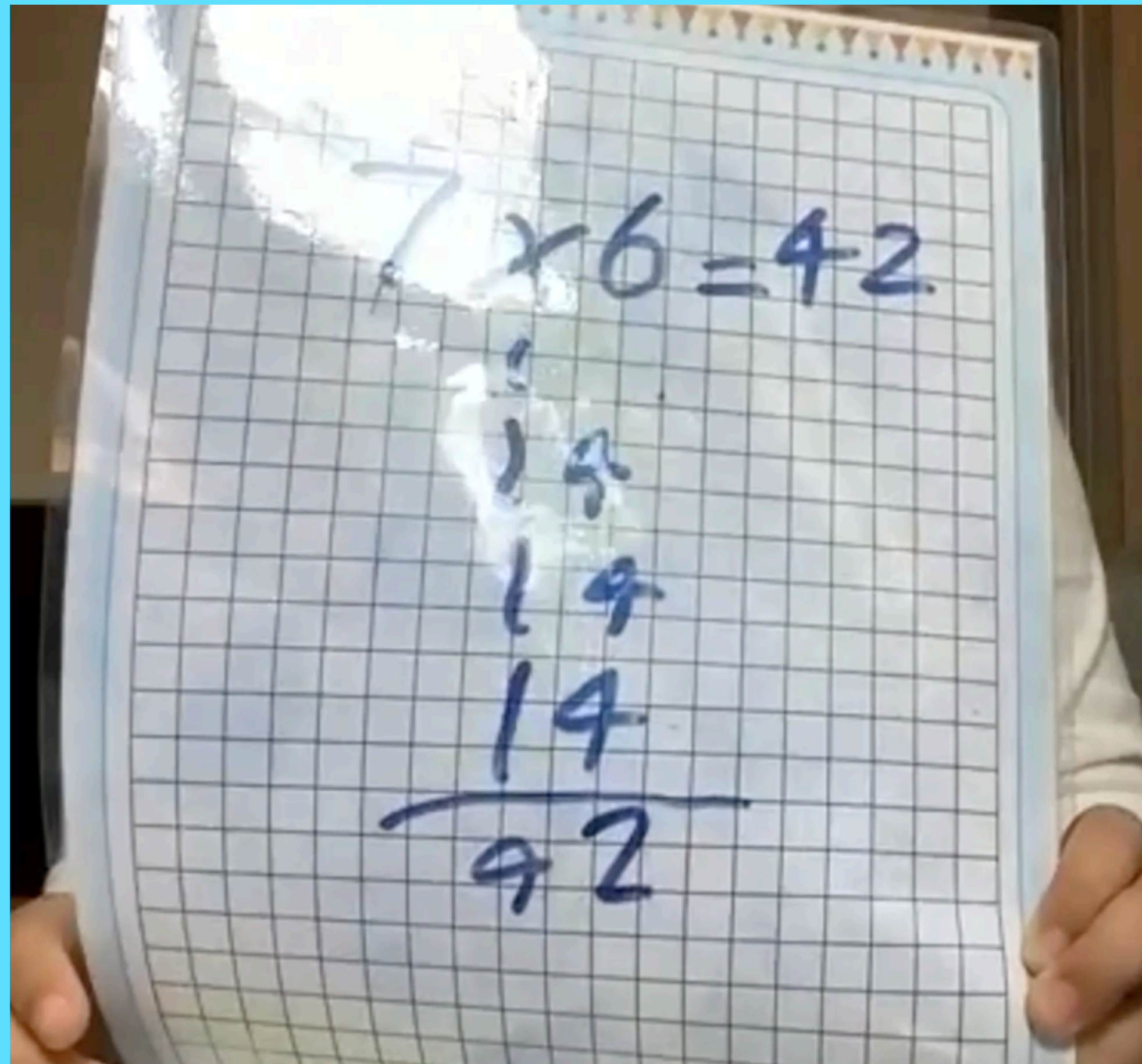




TEACHING SEQUENCE

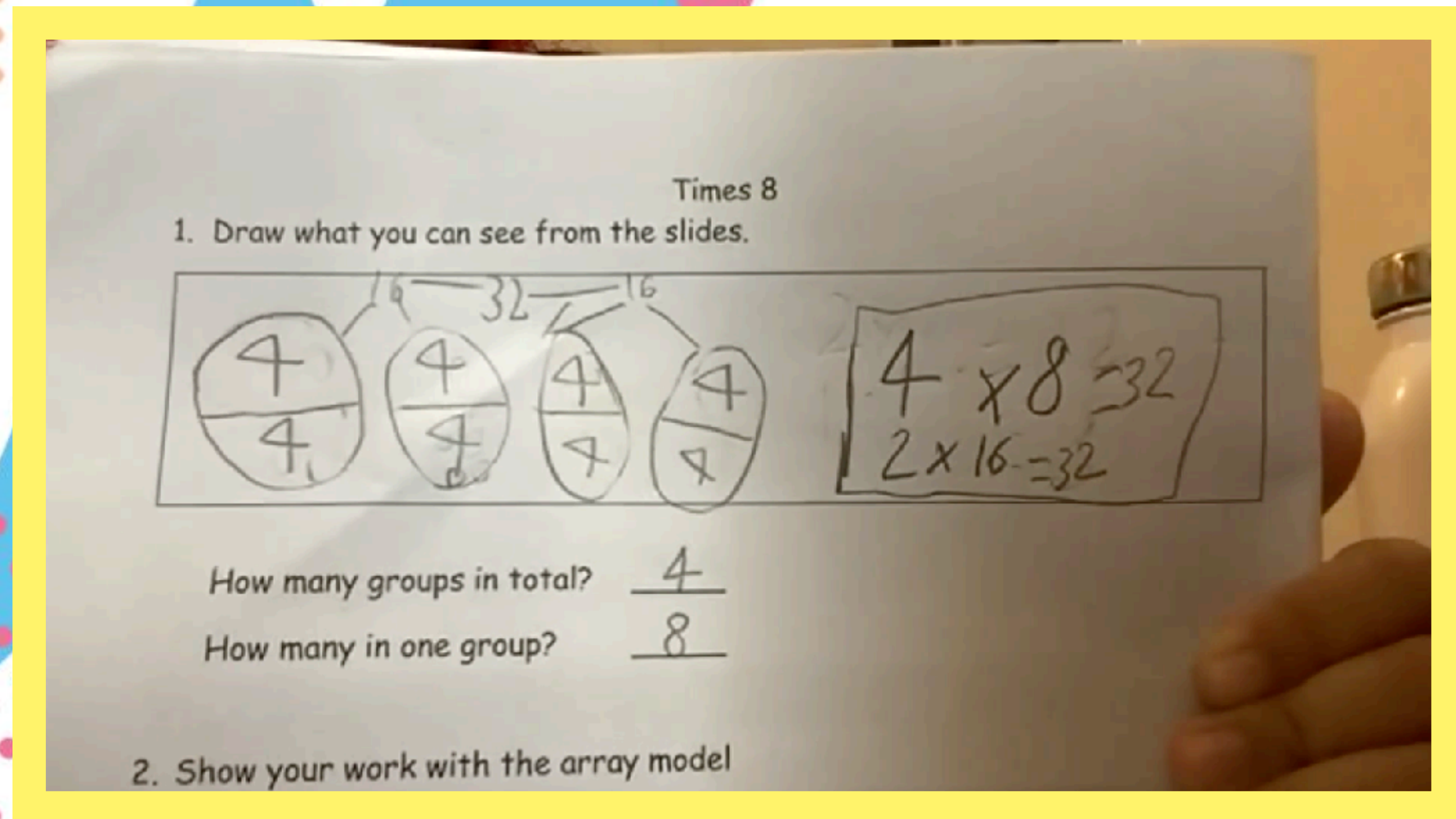
2 5 10 3 6 4 8 9 7 1 0

LET STUDENTS EXPRESS THEIR IDEAS - LAMINATED PAPER AND MAKERS



A photograph of a piece of graph paper with a blue border, held by a person. The paper has handwritten work in blue ink. At the top, the equation $7 \times 6 = 42$ is written. Below it, the number 7 is written vertically, followed by three 14s, and then 42 at the bottom, suggesting a multiplication process.

$$7 \times 6 = 42$$
$$\begin{array}{r} 7 \\ 14 \\ 14 \\ 14 \\ \hline 42 \end{array}$$



A photograph of a worksheet with a yellow border, held by a person. The worksheet has handwritten work in black ink. At the top right, it says "Times 8". Below this, it says "1. Draw what you can see from the slides." There is a drawing of four circles, each divided into two halves, with the number 4 in each half. Above the circles, the numbers 16, 32, and 16 are written. To the right of the circles, there is a box containing the equations $4 \times 8 = 32$ and $2 \times 16 = 32$. Below the drawing, it says "How many groups in total?" with the answer 4, and "How many in one group?" with the answer 8. At the bottom, it says "2. Show your work with the array model".

Times 8

1. Draw what you can see from the slides.

16 32 16

4 4 4 4

4 \times 8 = 32
2 \times 16 = 32

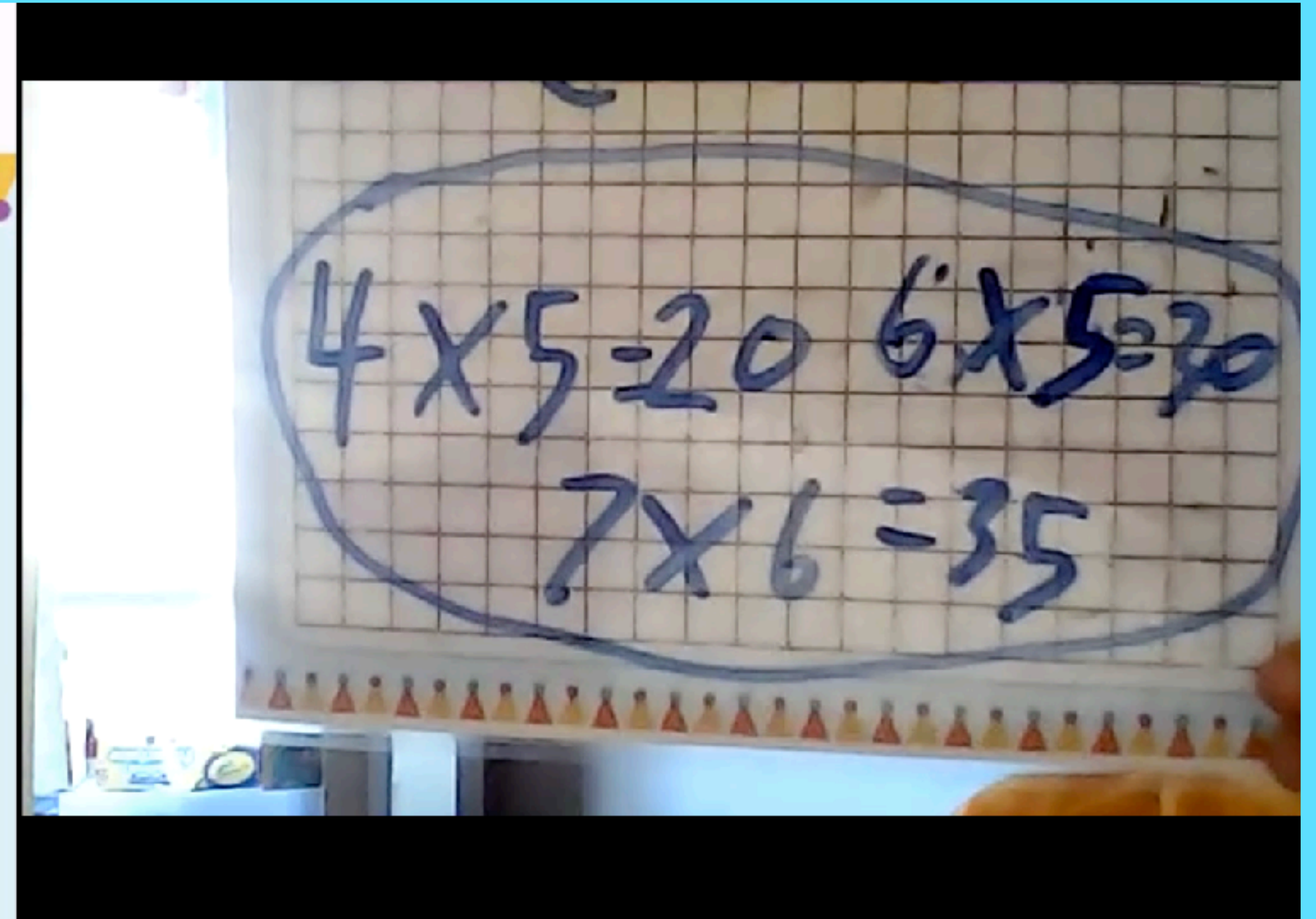
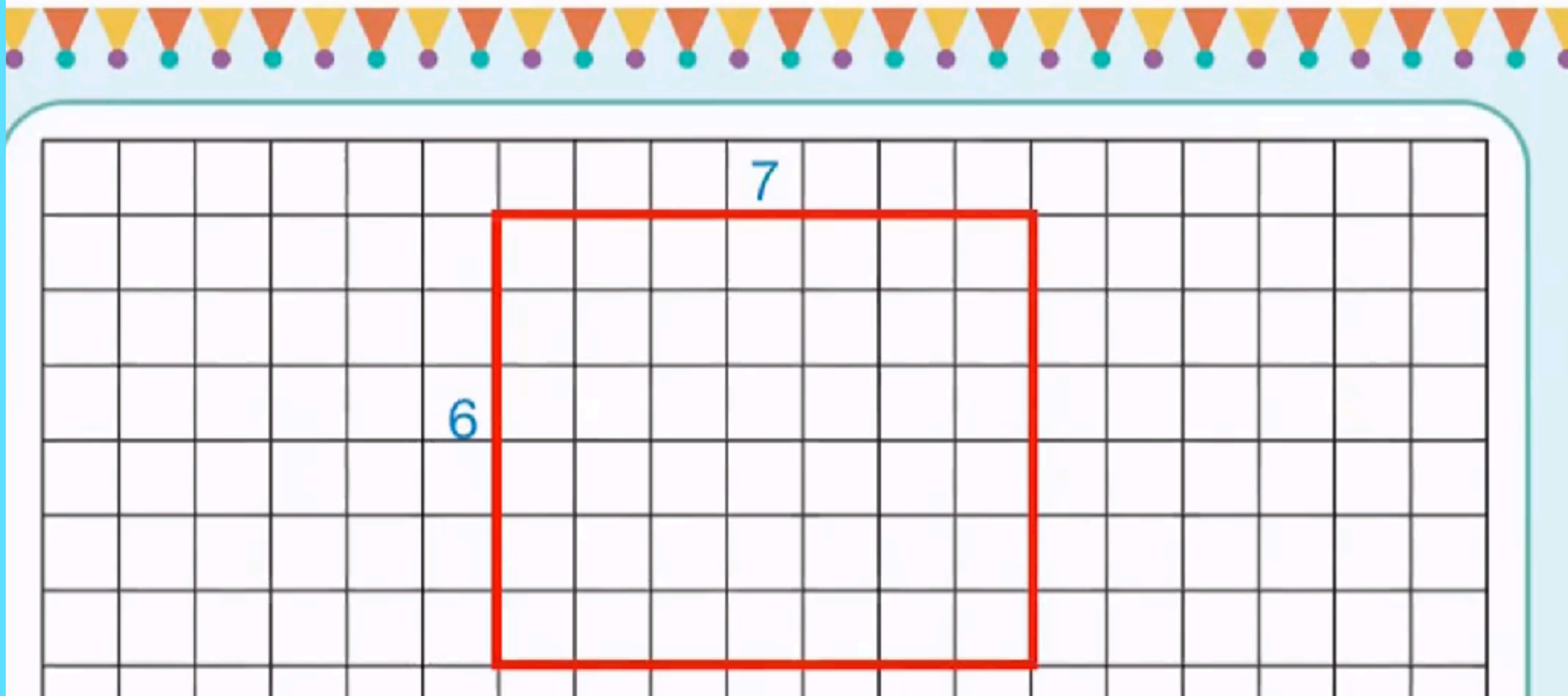
How many groups in total? 4

How many in one group? 8

2. Show your work with the array model

LET STUDENTS EXPRESS THEIR IDEAS

7×6



LET STUDENTS EXPRESS THEIR IDEAS

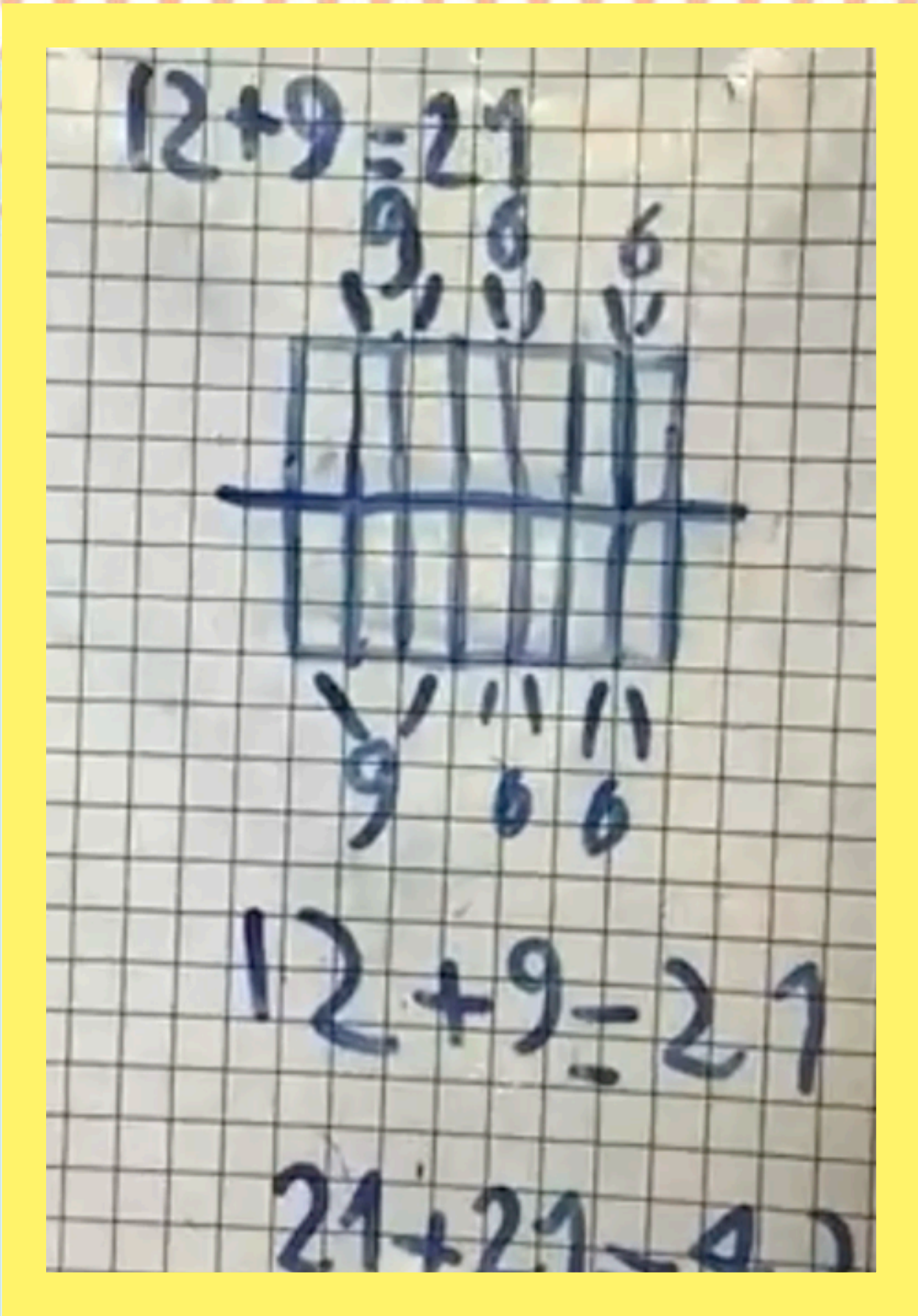
$12 + 9 = 21$

9 6 6

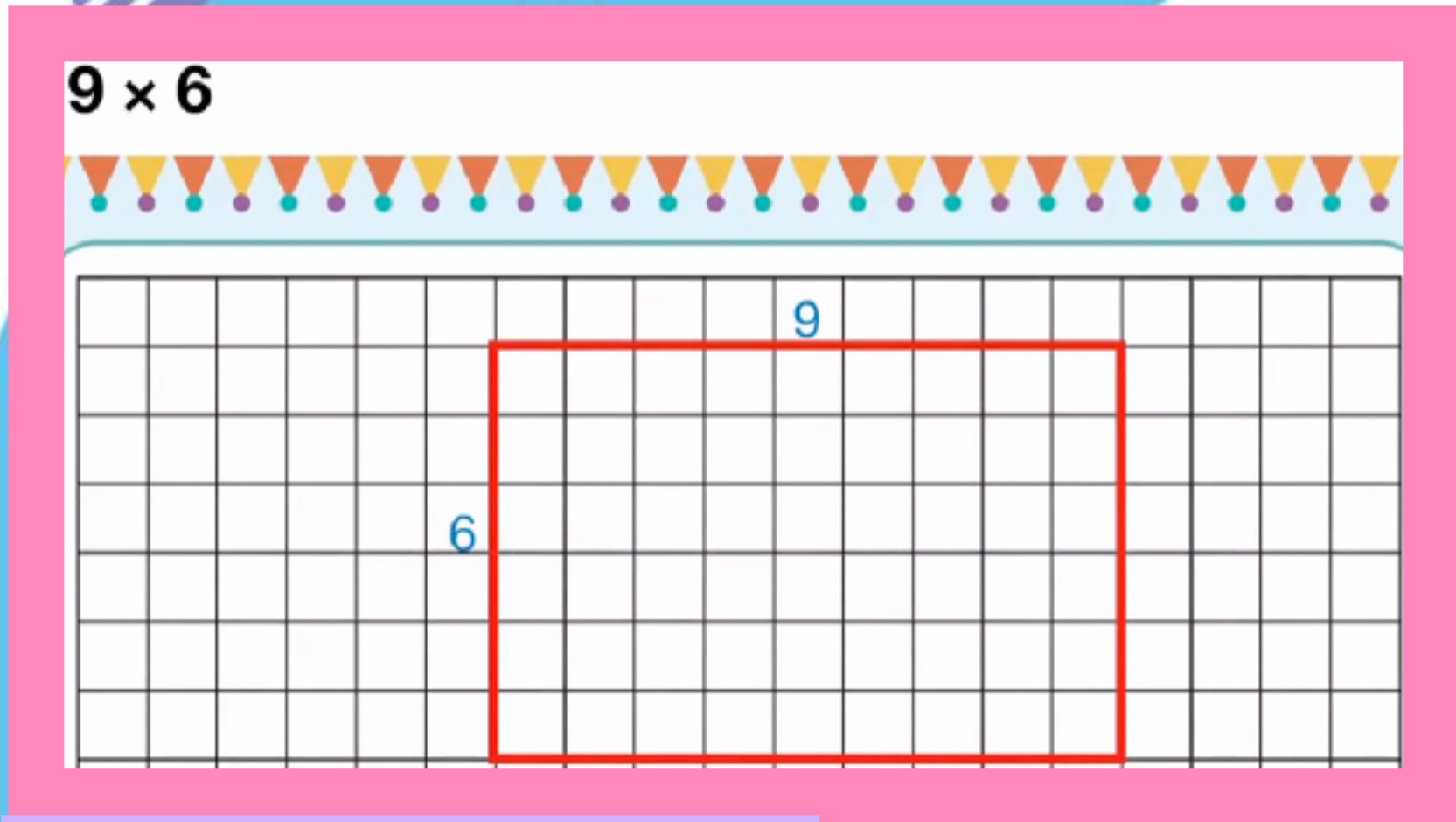
1 1 1

12 + 9 = 21

21 + 21 = 42



9×6



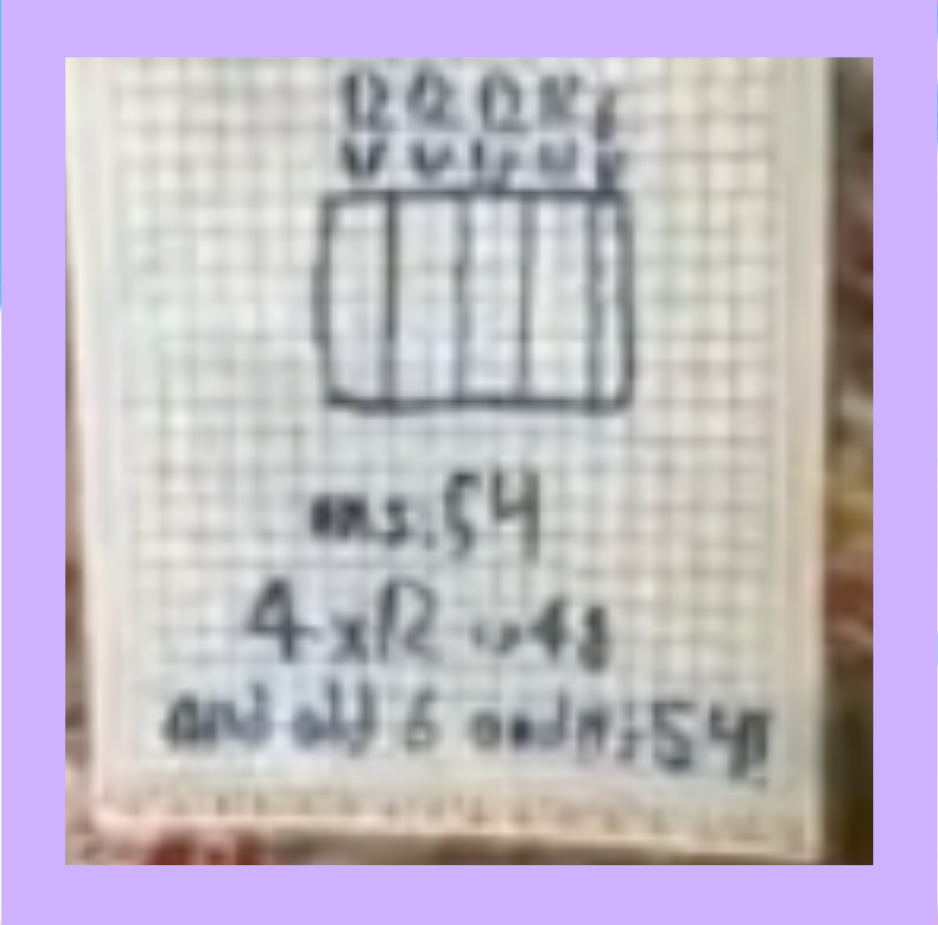
12 12 12

12 12 12

ans: 54

$4 \times 12 = 48$

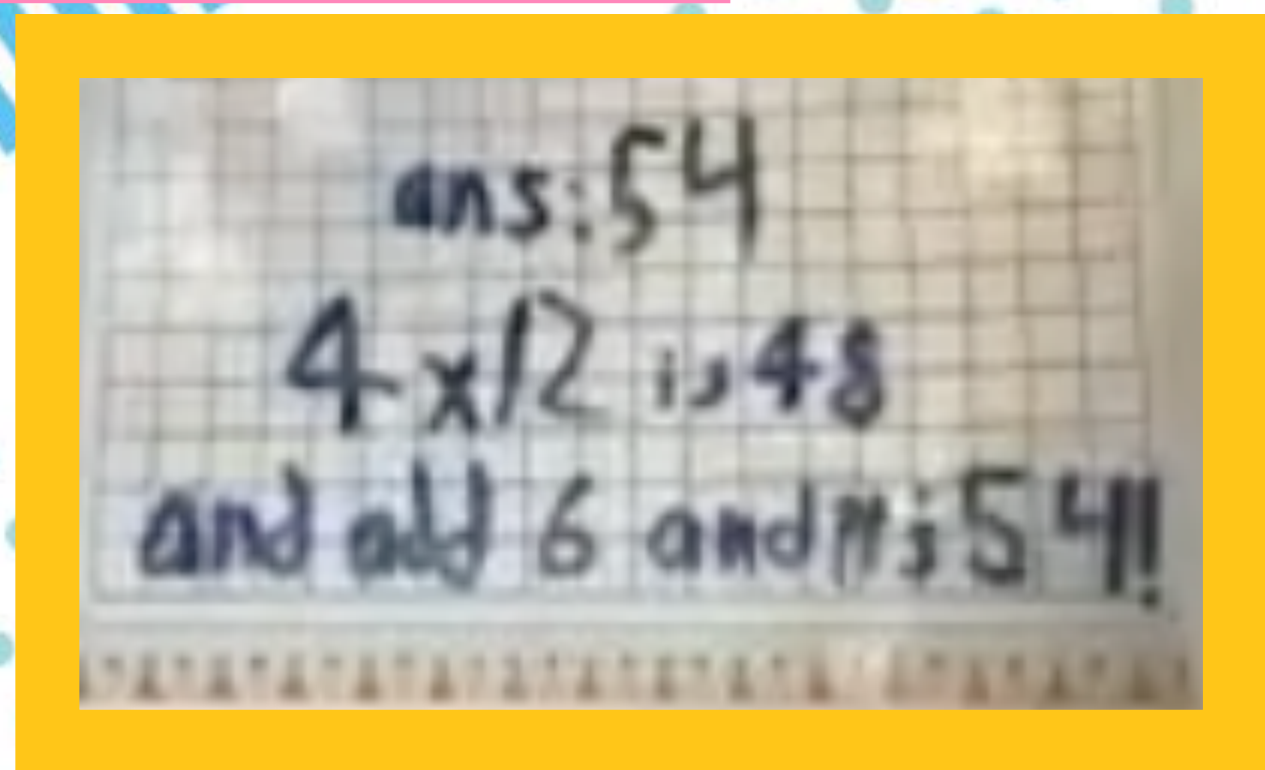
and add 6 and it's 54!



ans: 54

$4 \times 12 = 48$

and add 6 and it's 54!



USING SONGS

Skip Counting by

7

to the tune of

Mary Had a Little Lamb



moovly

PlanningPlaytime.blogspot.com

SLOGAN

Here's a little good advice
please just always double twice!

			Double Once				Double Twice					
1	×	4	1	+	1	=	2	2	+	2	=	4
2	×	4	2	+	2	=	4	4	+	4	=	8
3	×	4	3	+	3	=	6	6	+	6	=	12
4	×	4	4	+	4	=	8	8	+	8	=	16
5	×	4	5	+	5	=	10	10	+	10	=	20
6	×	4	6	+	6	=	12	12	+	12	=	24
7	×	4	7	+	7	=	14	14	+	14	=	28
8	×	4	8	+	8	=	16	16	+	16	=	32
9	×	4	9	+	9	=	18	18	+	18	=	36

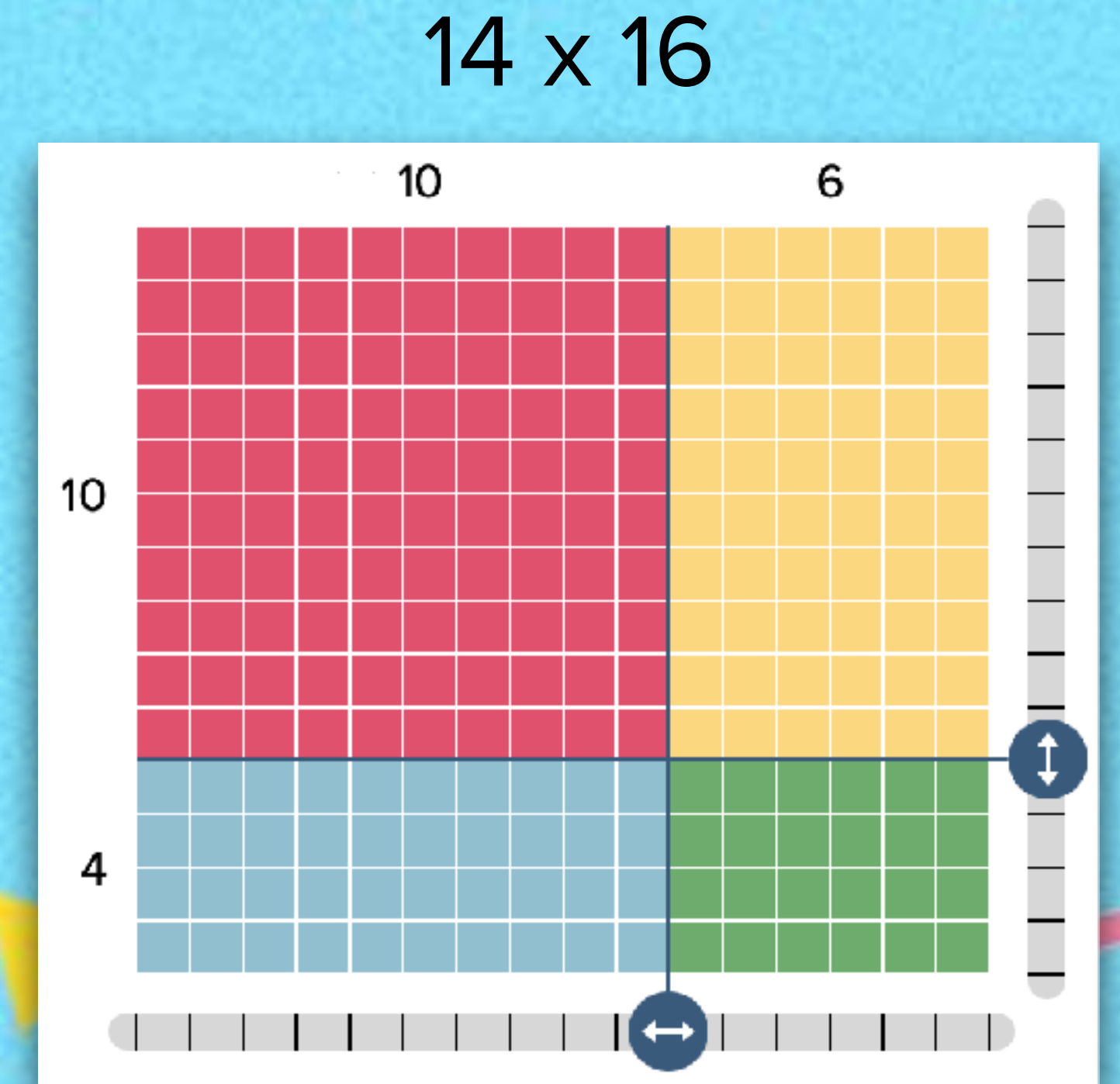
SLOGAN

Here's a very clever tack,
do 10 times and then subtract!

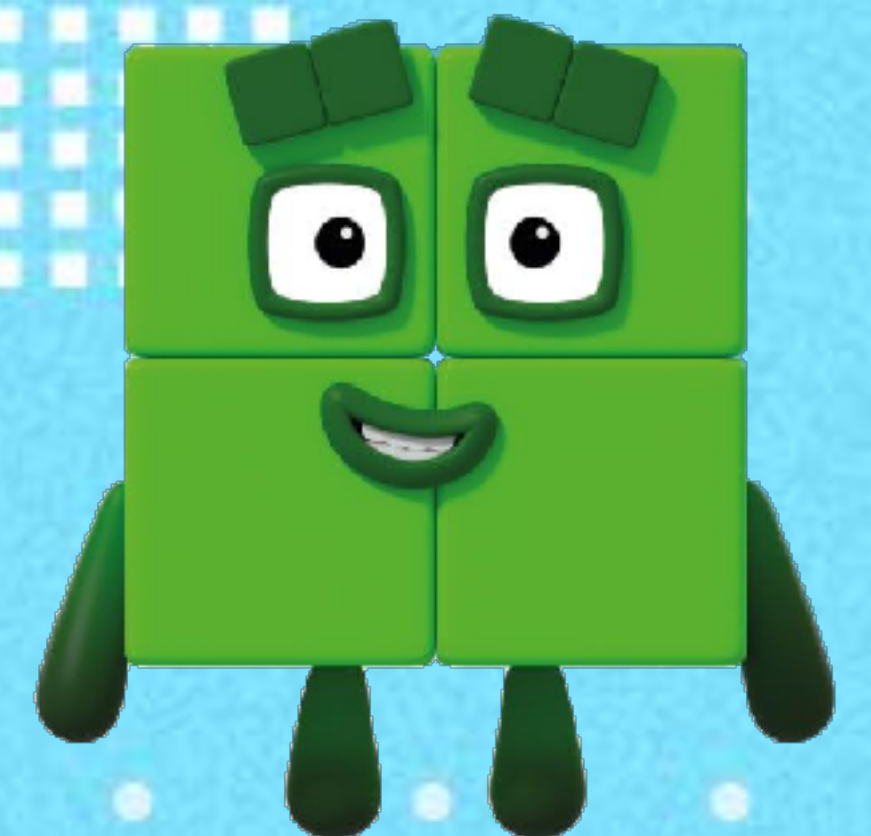
Seven is a cinch to do,
First times 5
then add times 2!

CONNECTION WITH FUTURE TOPICS

- **P.2 Division**
(Number of groups, how many items in each group)
- **P.3 Multiplication**
(e.g. 13×4 is done like $3 \times 4 + 10 \times 4$)
- **P.4 Area of rectangle**
(Counting number of unit squares by multiplication)



THANK
YOU!



EXTRA

POLLING

Polling



Skip

99

$$3 \times 7 =$$

A. 14

B. 21

C. 28

D. 37

Title

Total Questions

Anonymous

▼ Poll 1: A, B, C, D?

1 question

No

1. Which one is correct? (Single Choice)

Answer 1 : A

Answer 2 : B

Answer 3 : C

Answer 4 : D

TEACHER: TWO DEVICES

