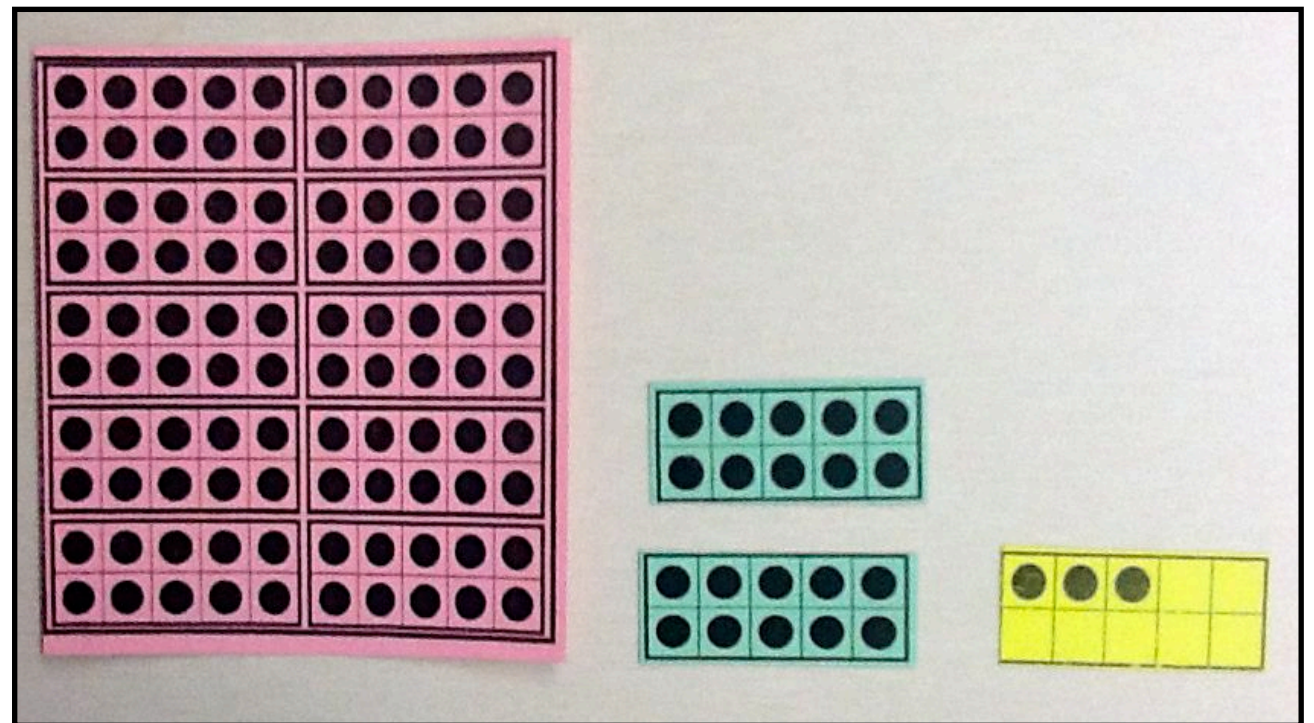
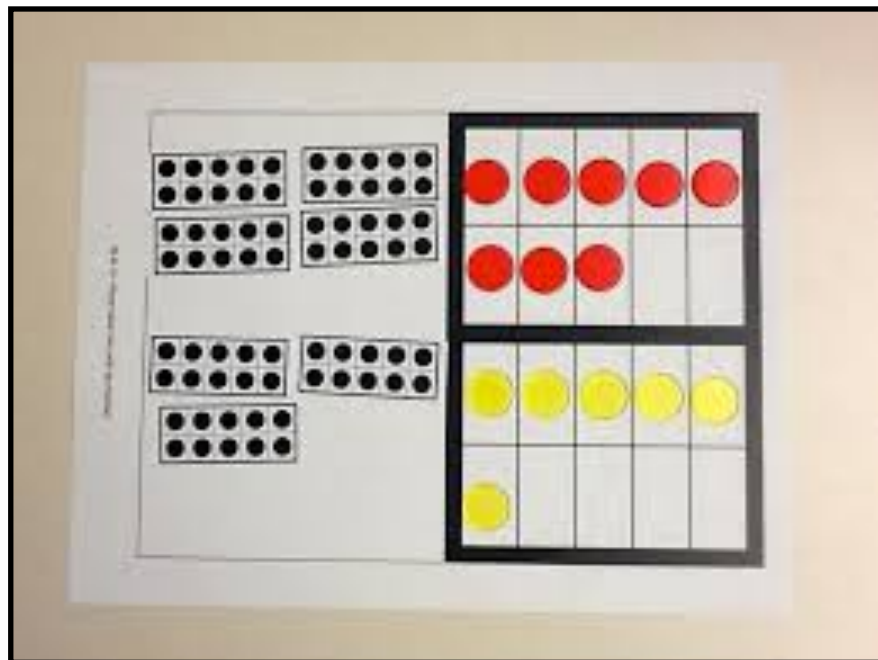


Using Ten Frames to Teach Addition with Whole and Decimal Numbers Gr. 2 - 5



April 8th, 2019

Jen Barker - Surrey Numeracy Helping Teacher

Website: meaningfulmathmoments.com



@barkerjBarker

Acknowledgement

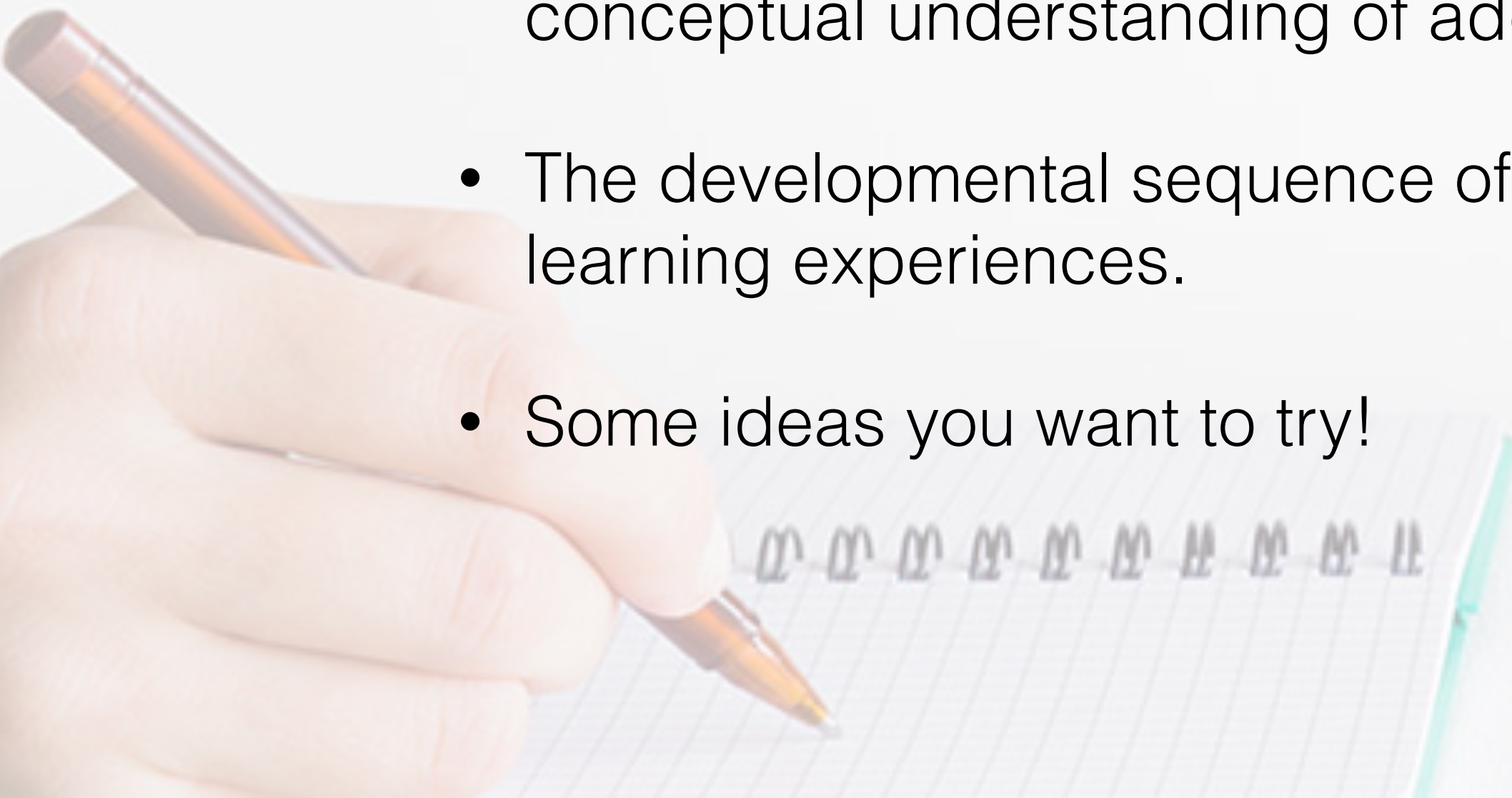


Before going any further, it is important that we recognize that we are here today on the unceded, shared territories of the Coast Salish people on which our schools are located. We are so grateful and honoured to be able to live, learn, and create on these beautiful lands.

Learning Intentions

By the end of the session, I hope you will leave with:

- Knowledge and understanding of why you might want to use ten frames to develop a conceptual understanding of addition.
- The developmental sequence of the learning experiences.
- Some ideas you want to try!



Where can you find this PPT?

www.meaningfulmathmoments.com

HOME MUSINGS RESOURCES INSTRUCTIONAL IDEAS PRESENTATIONS/PUBLICATIONS



Click the
Presentations tab

Meaningful Moments in MATHEMATICS



Welcome! Thanks for stopping by my site. I was inspired to write down my [Mathematical musings](#) by several other Math educators who have generously shared their stories with me either through workshops, blogs, Twitter, or through publications and have inspired my love of Mathematics and shaped my practice.

I have taught Kindergarten through Grade Five in both Richmond and the Surrey School District. This year I am in a new role. I have joined the Numeracy Helping teachers and will be working primarily with K - 7

Search 

Tweets by [@Barkerjbarker](#)

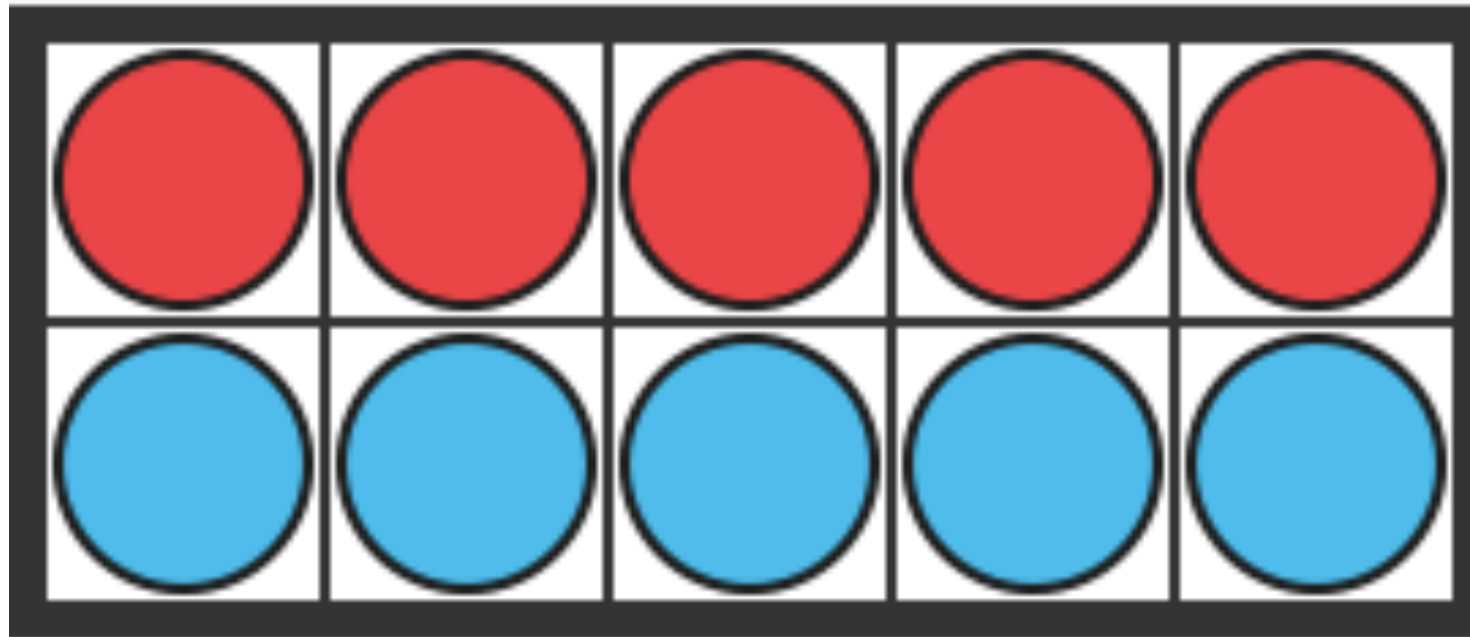


Jennifer Barker

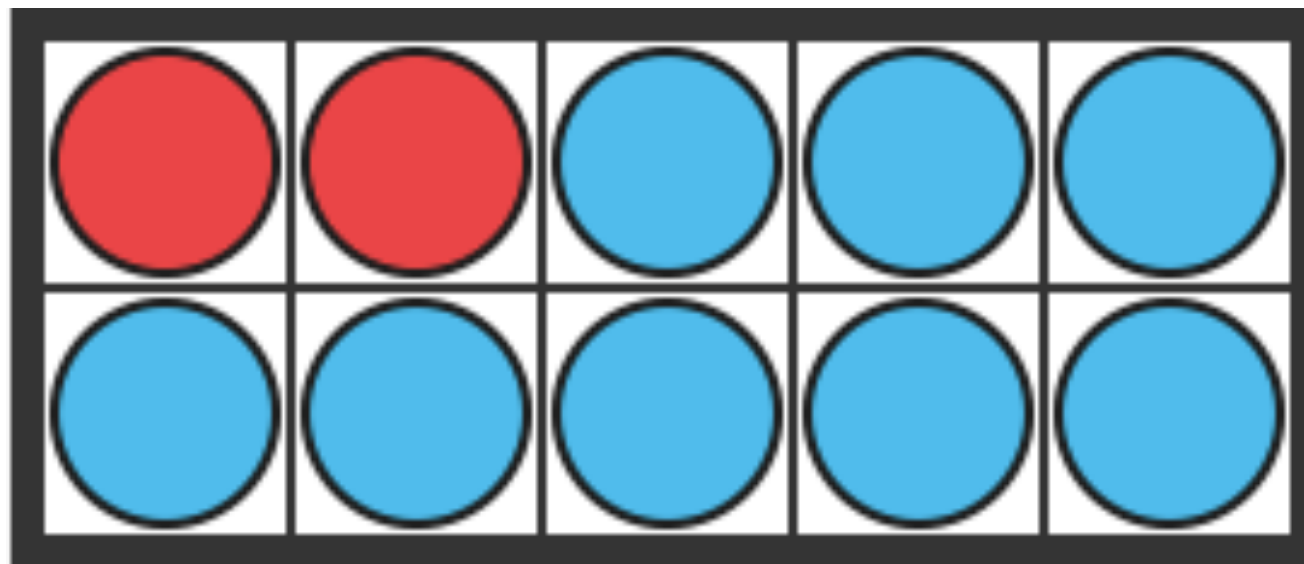
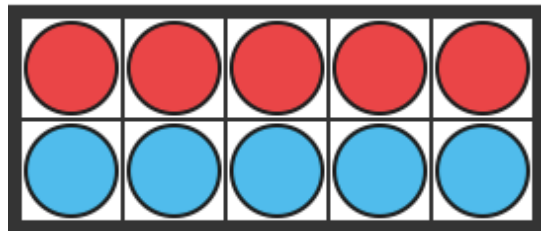
[@Barkerjbarker](#)

Check out all the amazing K - 7 sessions!
Titles and descriptions are online
[#sd36learn](#)

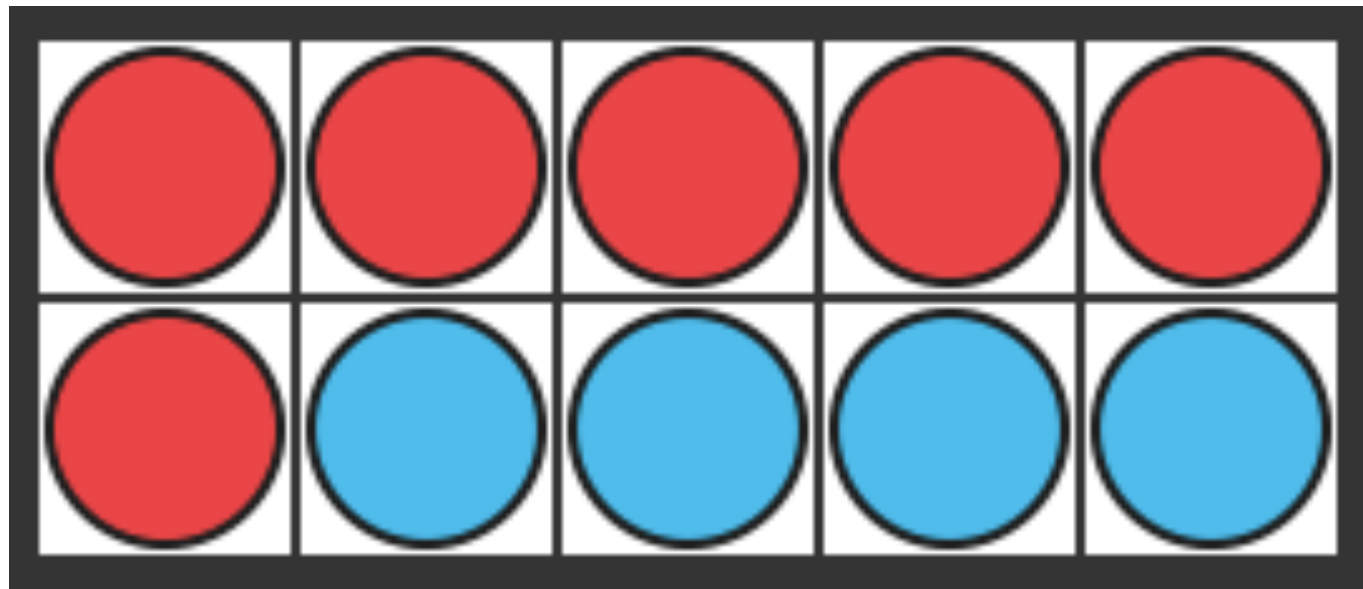
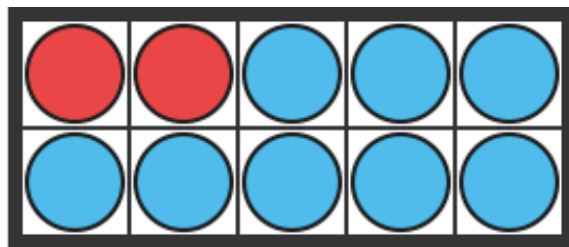
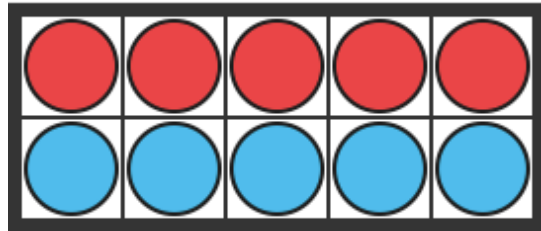
Why Use Ten Frames?



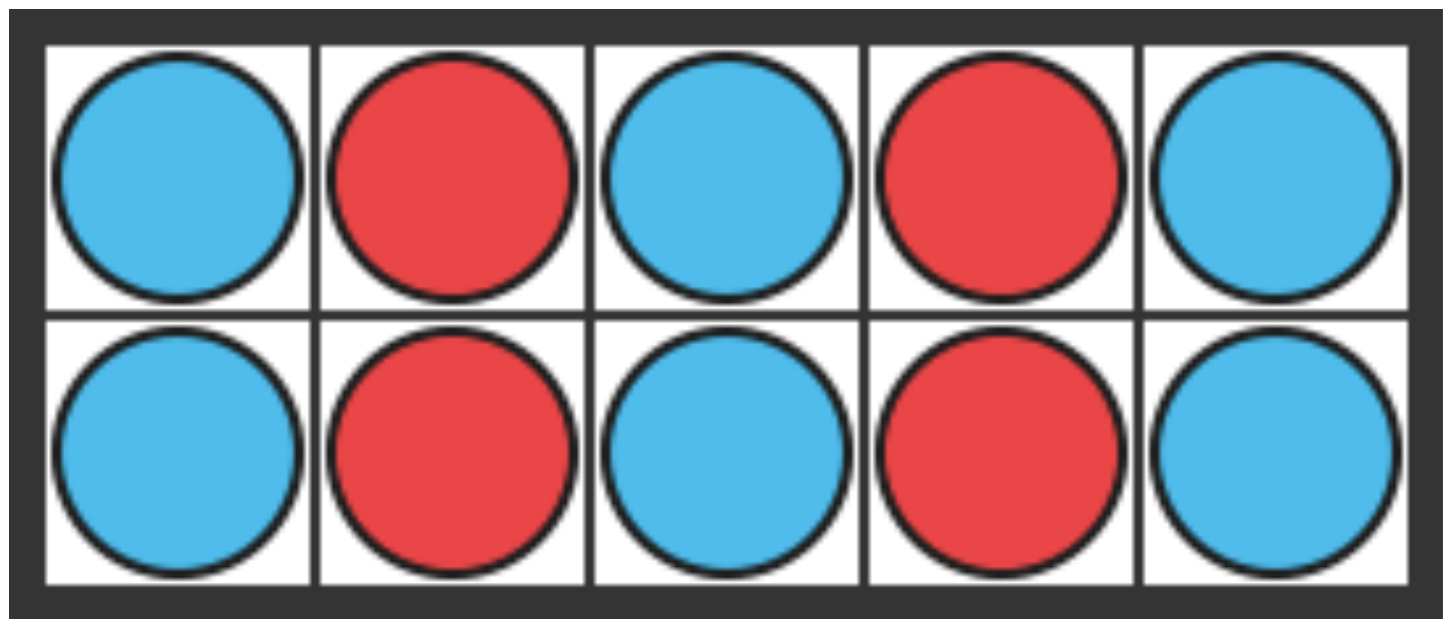
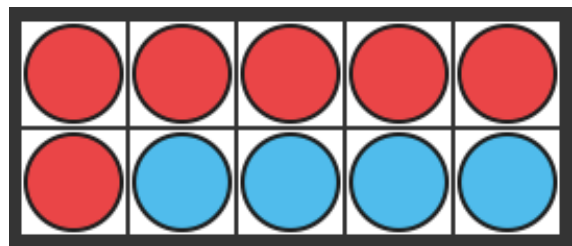
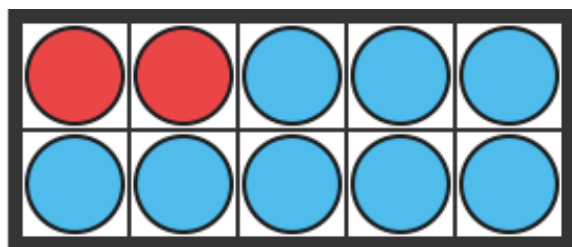
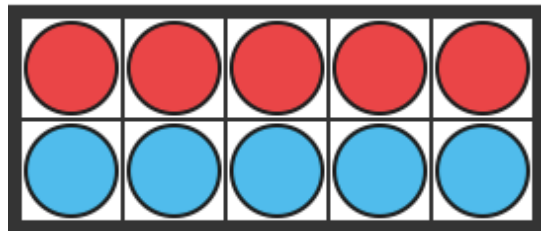
Why Use Ten Frames?



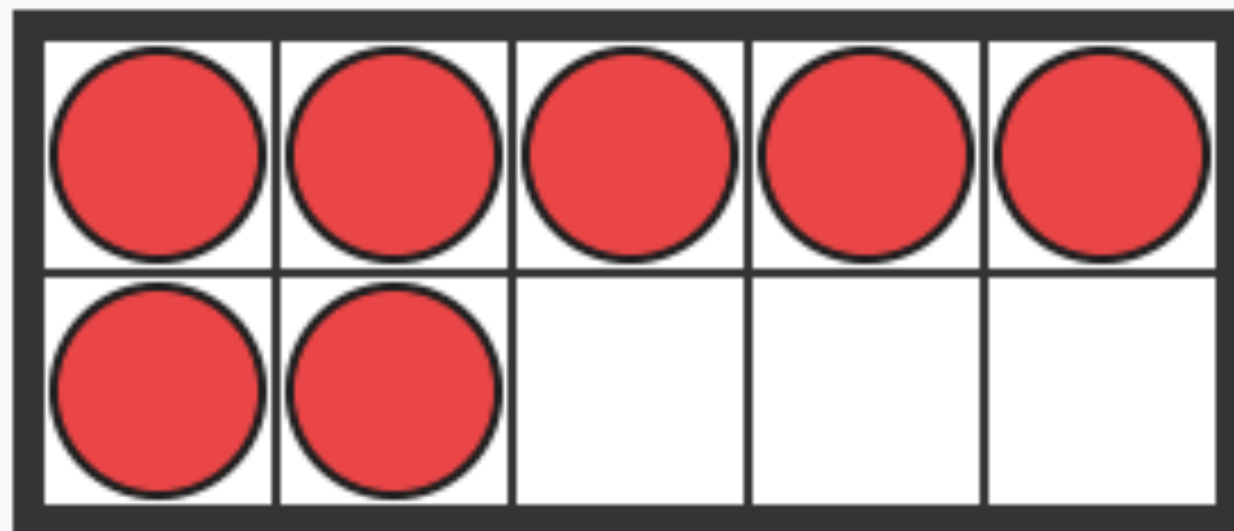
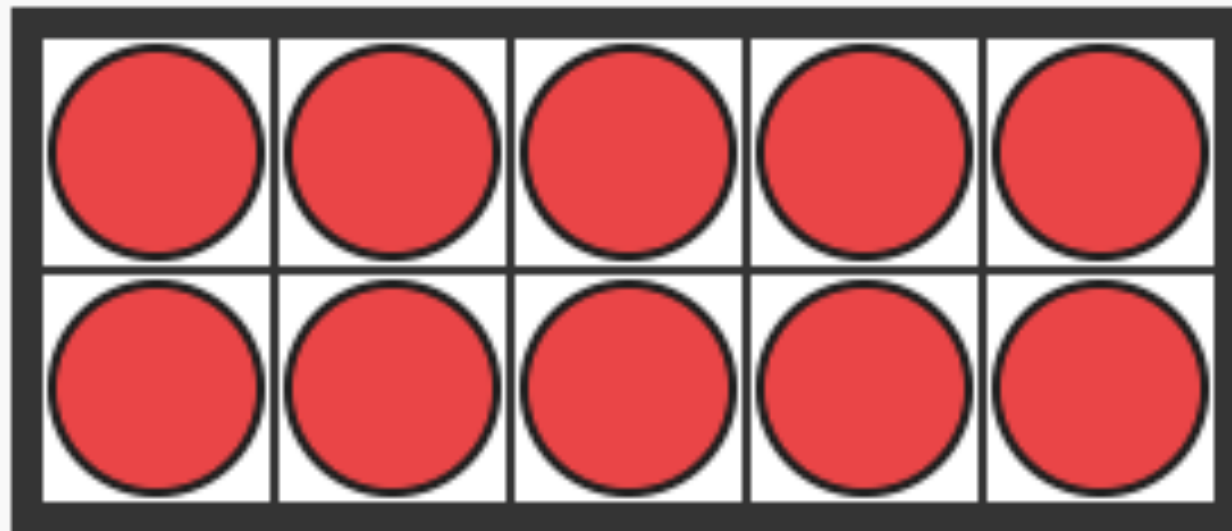
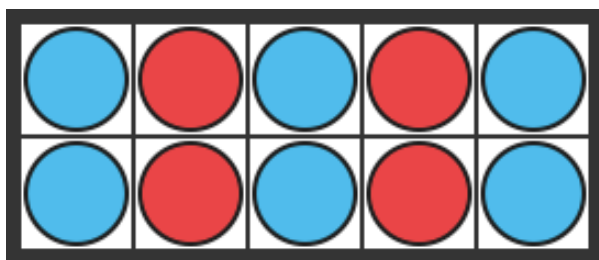
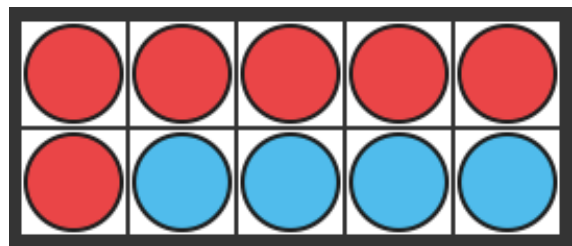
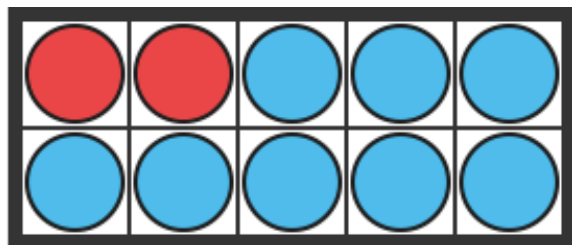
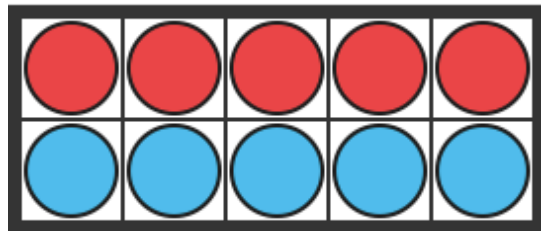
Why Use Ten Frames?



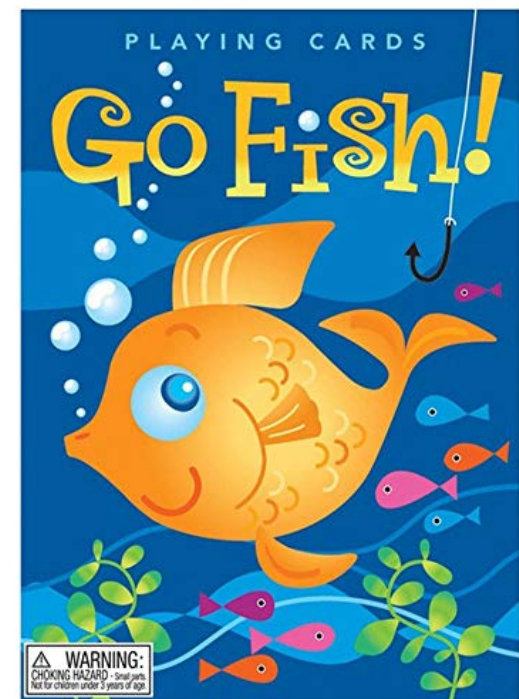
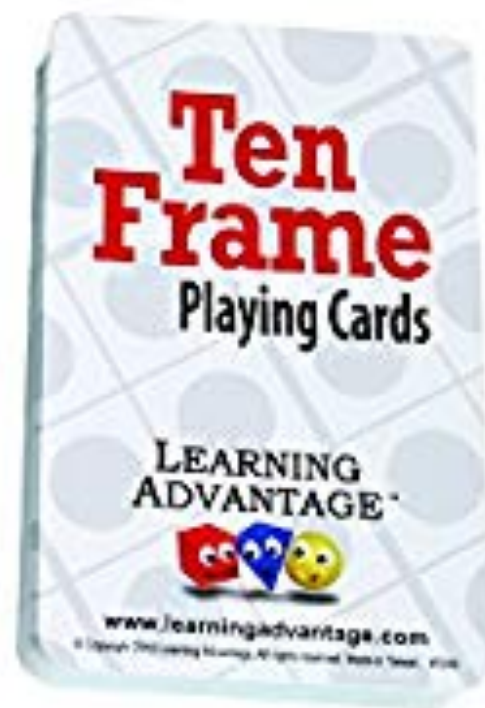
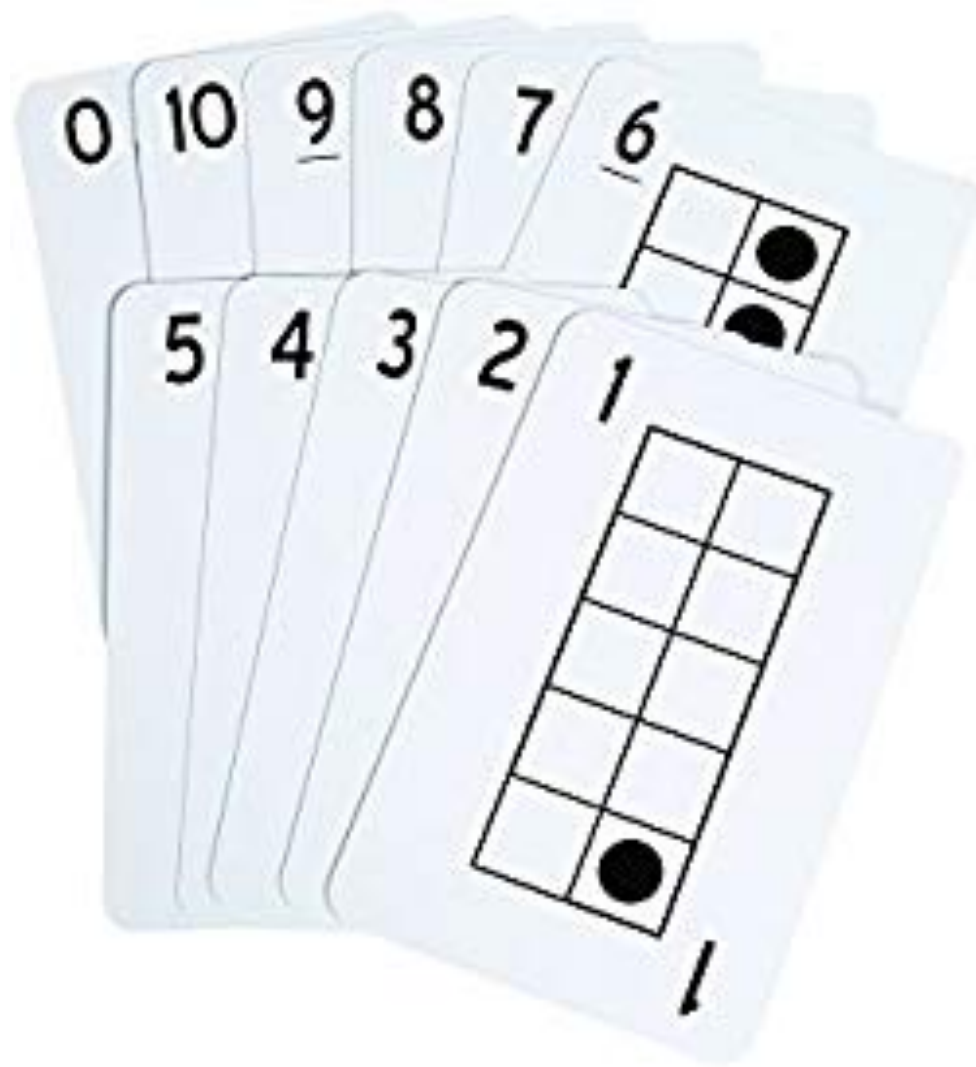
Why Use Ten Frames?



Why Use Ten Frames?

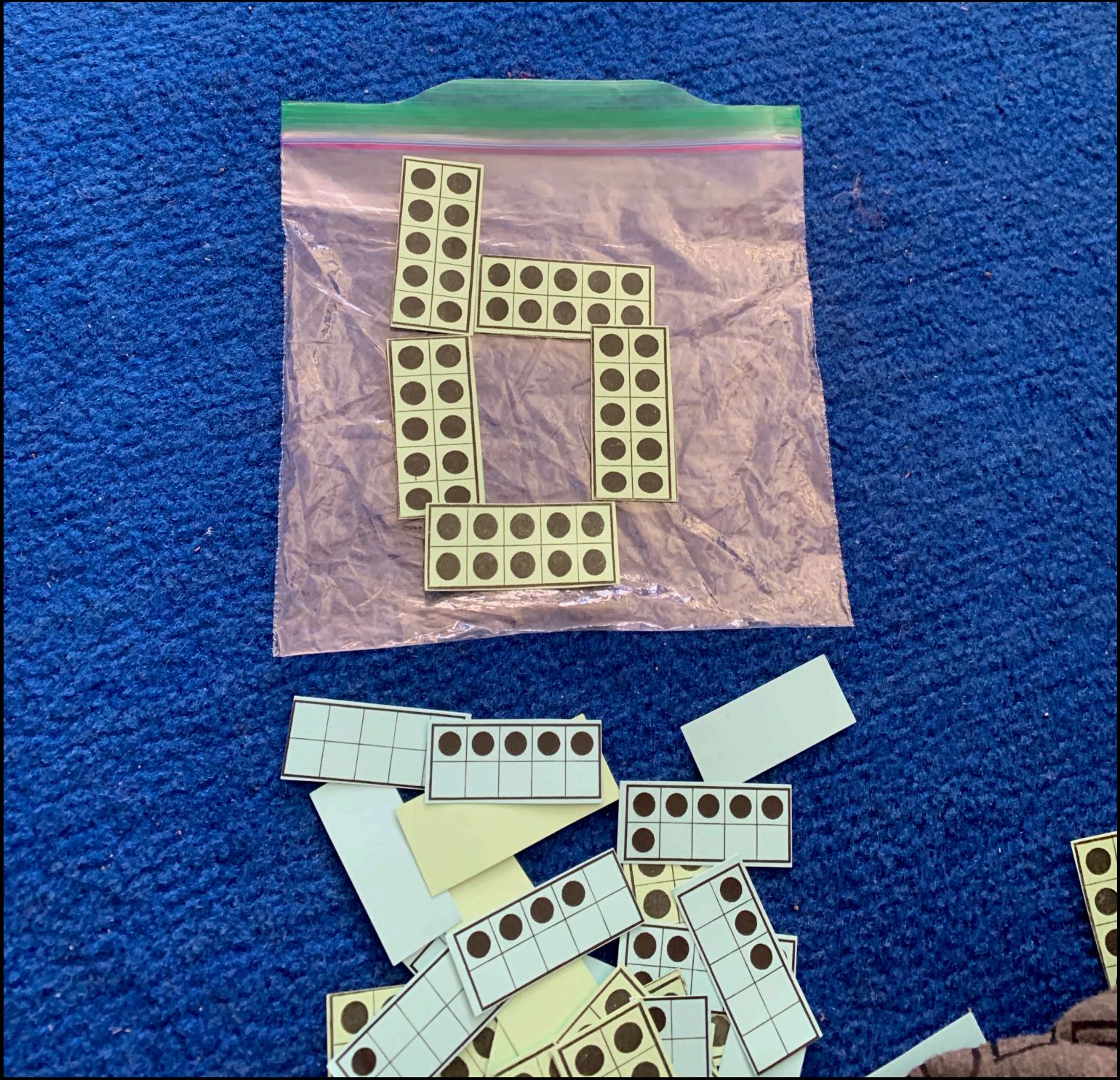


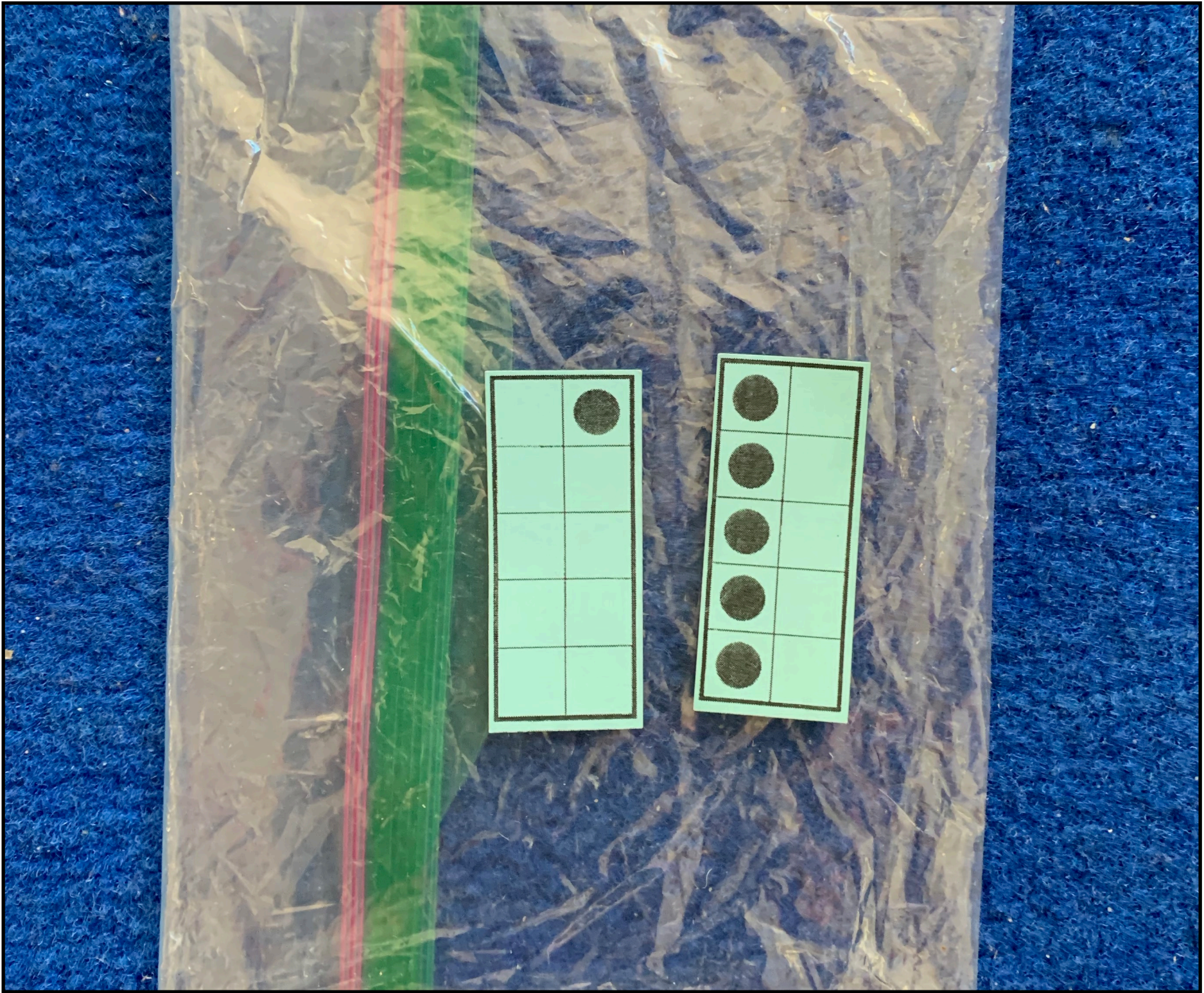
Students must become
FAMILIAR with ten frames



SNAP

**CONCENTRATION/
MEMORY**





Representing Quantities

Let's
play!



Using Quick Images

Flash and Say
Flash and Show
Flash and Build

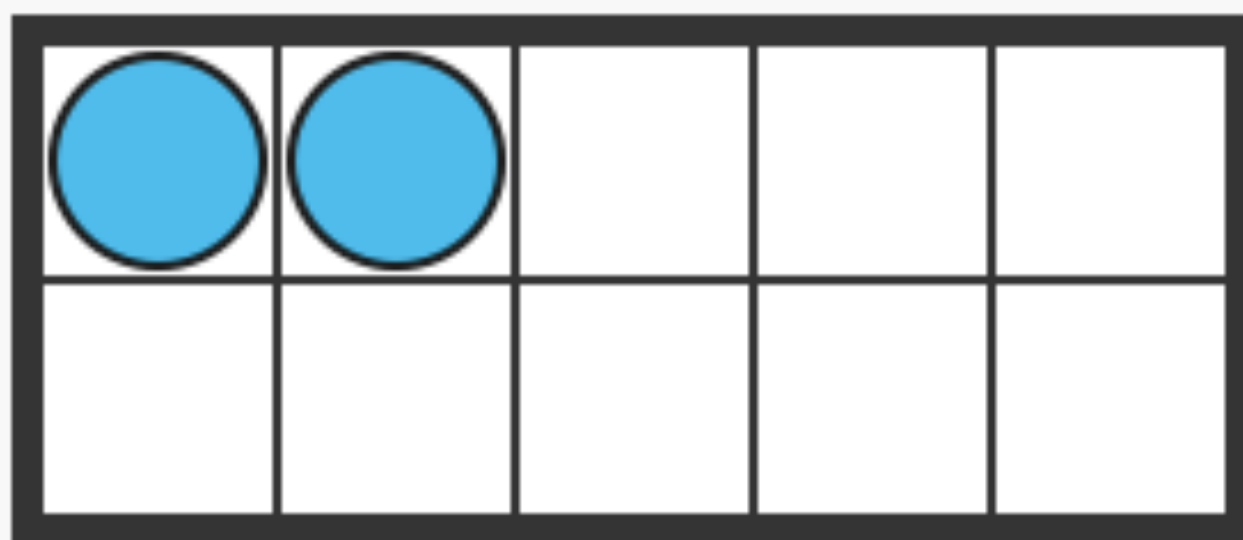
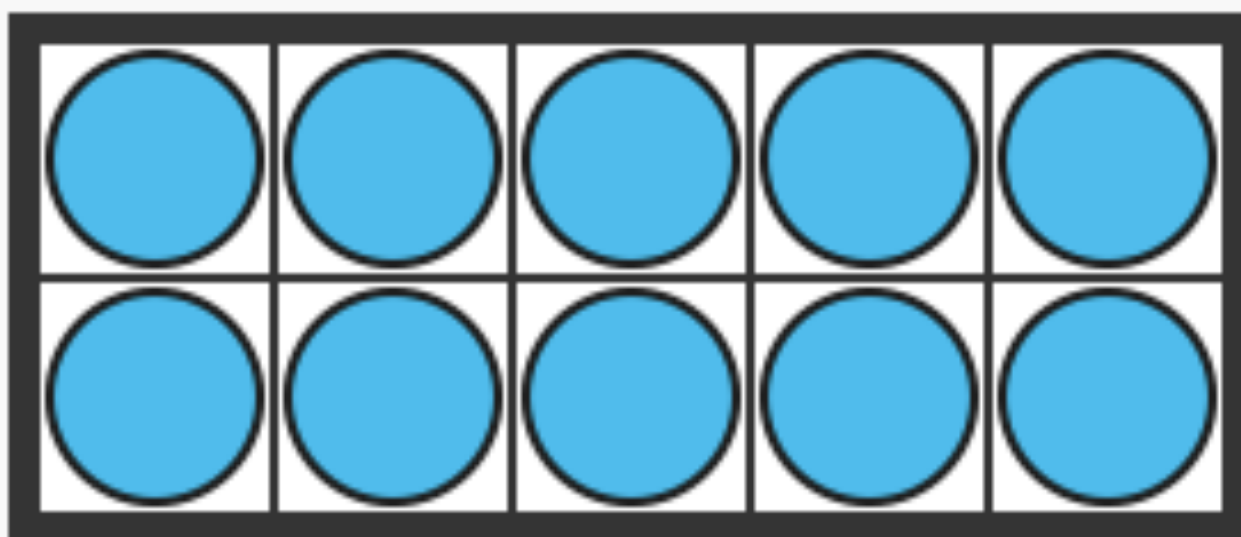
It is important because students need to develop:

- ability to move beyond counting to see spatial patterns
- seeing groups/sets of #'s
- a strong sense of both five and ten and the relationship between these quantities (similar to 50 and 100 and 500 and 1000)
- develop part-part whole understanding
- place value understanding

How many dots do you see?

How do you see them?

Is there a number sentence/ equation
that we could write that would match
how _____ determined how many
dots there were?

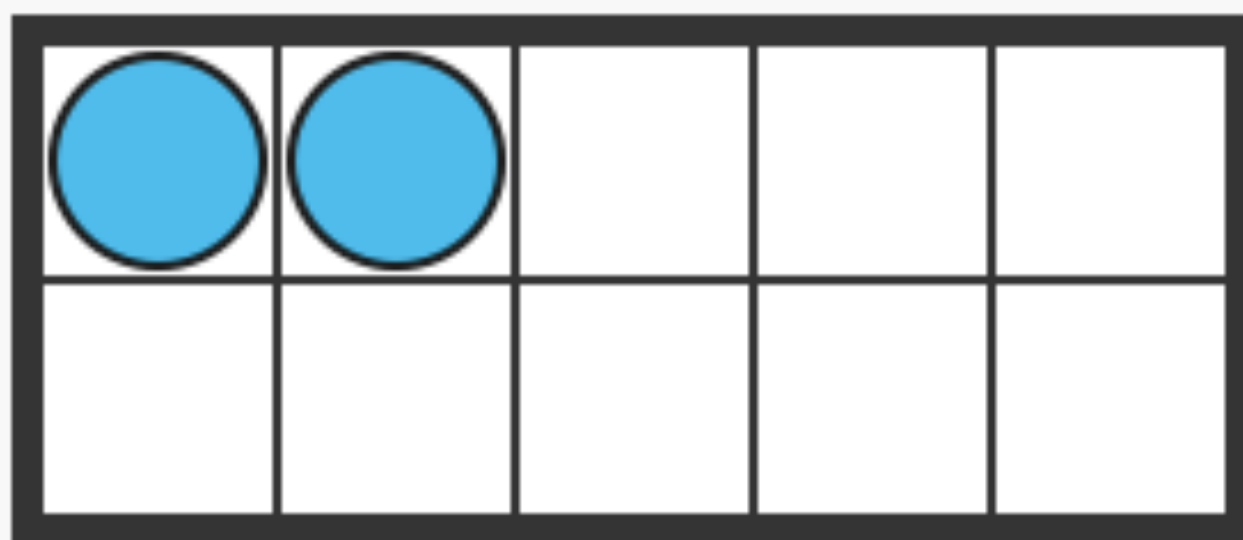
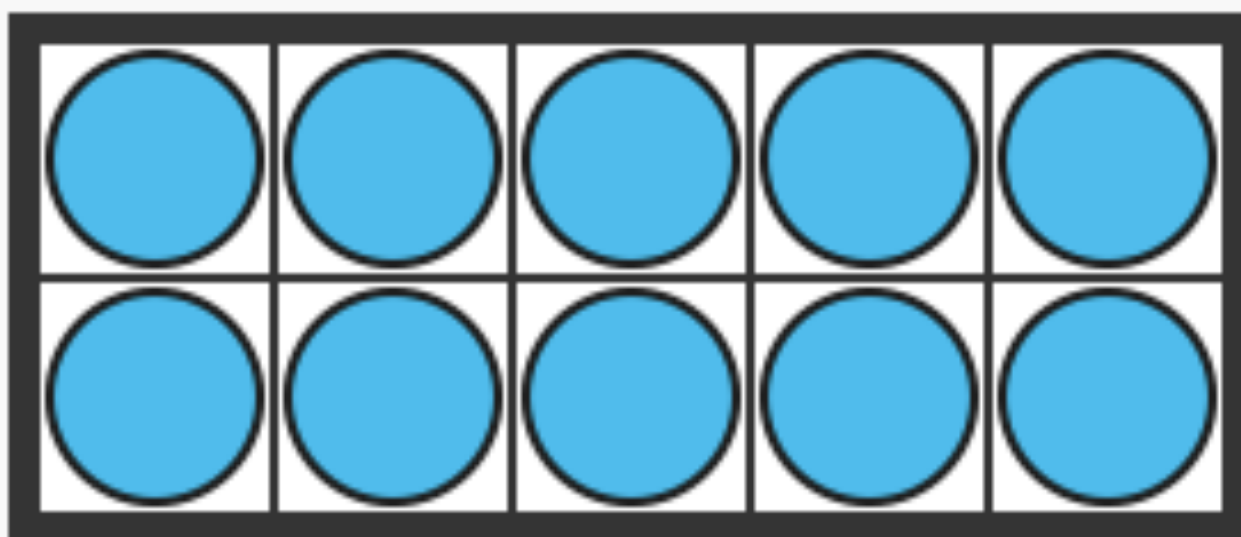


How many dots do you see?

How do you see them?

Is there a number sentence/ equation
that we could write that would match
how _____ determined how many
dots there were?

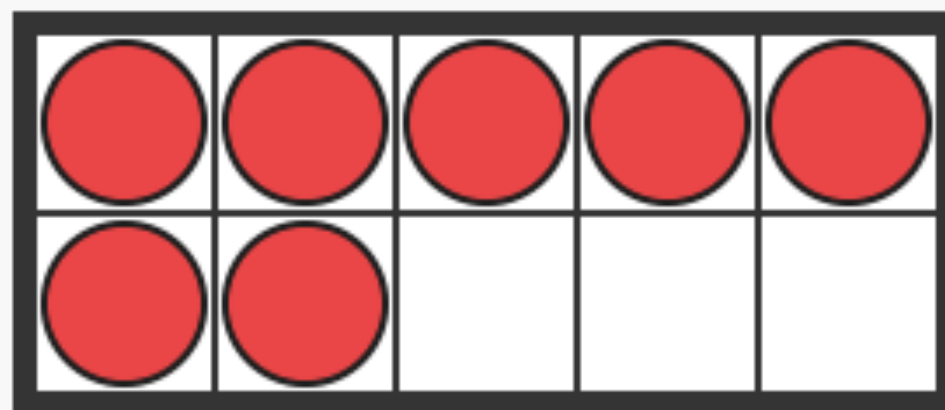
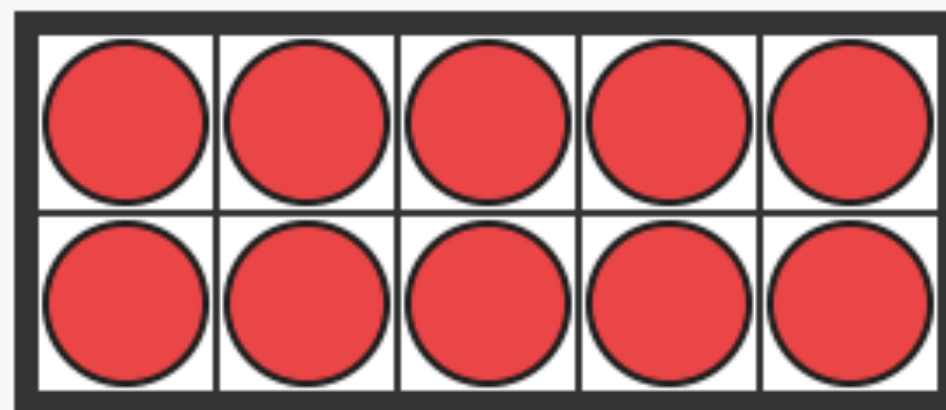
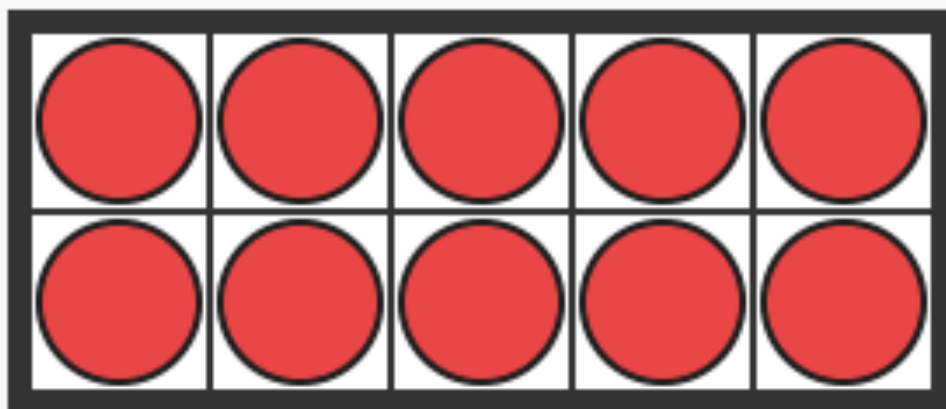
And if a whole were
one full ten frame
then how many?



How many dots do you see?

How do you see them?

Is there a number sentence/ equation
that we could write that would match
how _____ determined how many
dots there were?

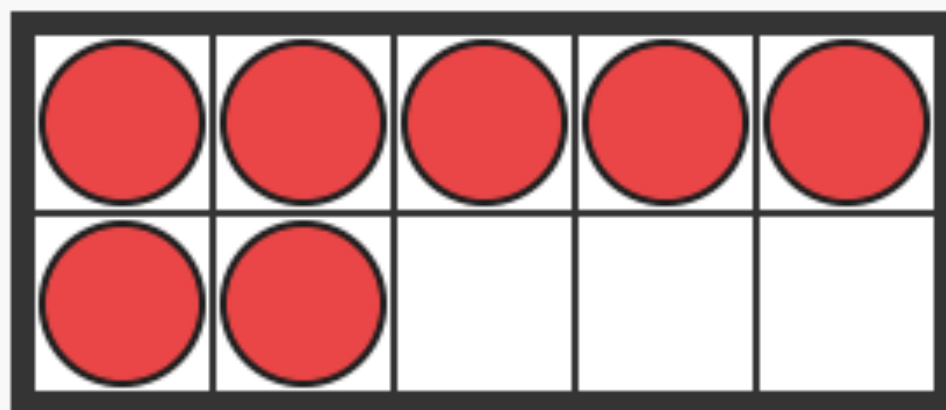
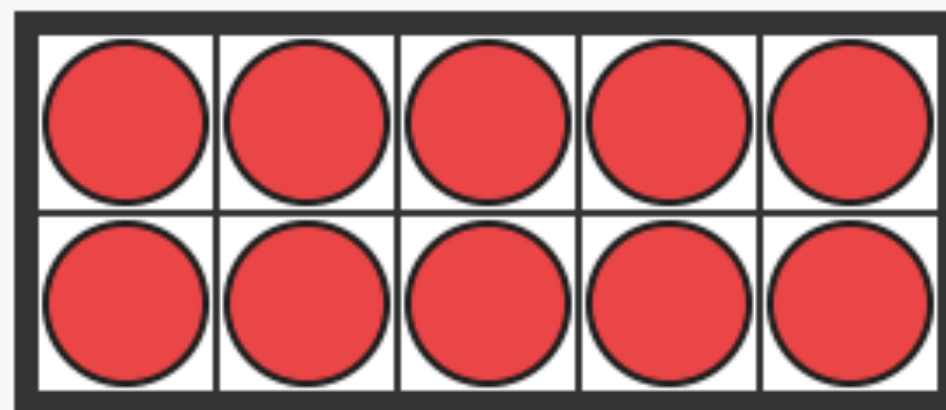
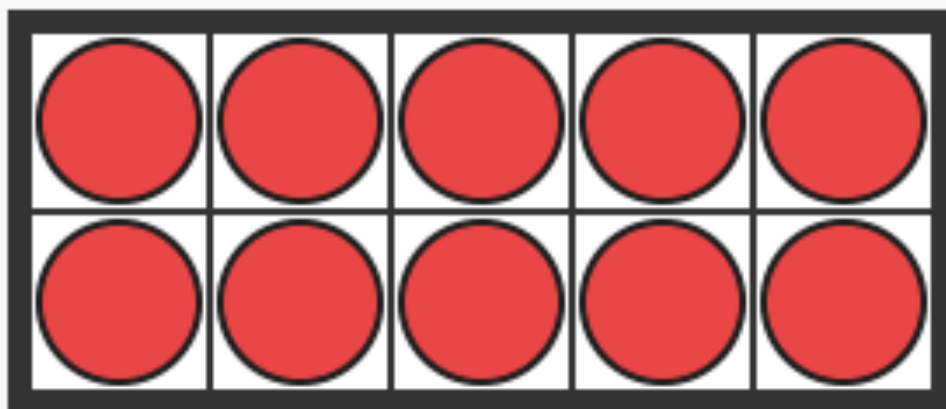


How many dots do you see?

How do you see them?

Is there a number sentence/ equation
that we could write that would match
how _____ determined how many
dots there were?

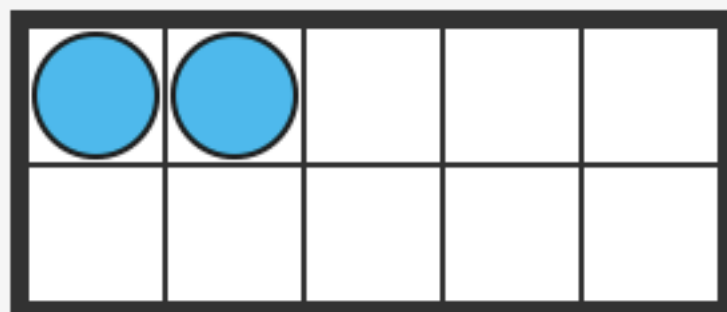
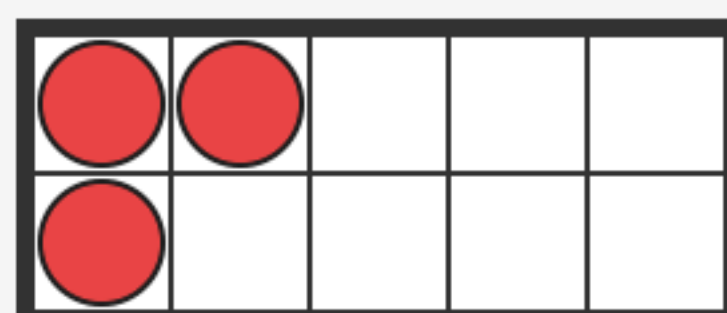
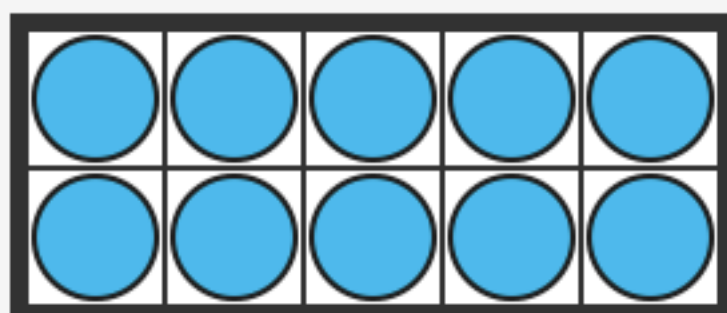
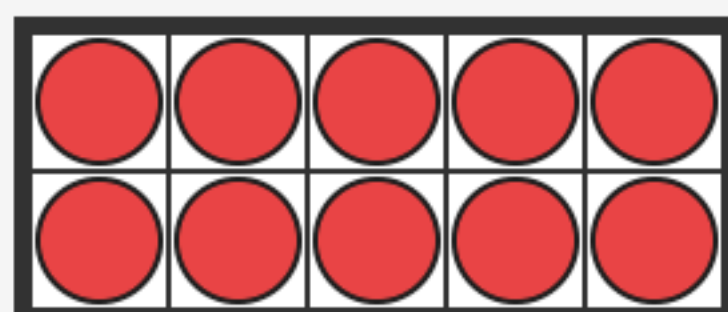
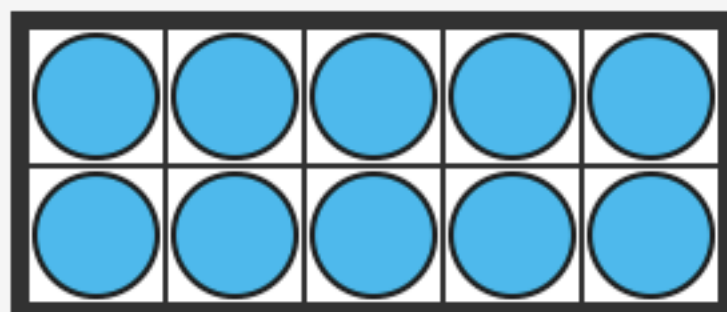
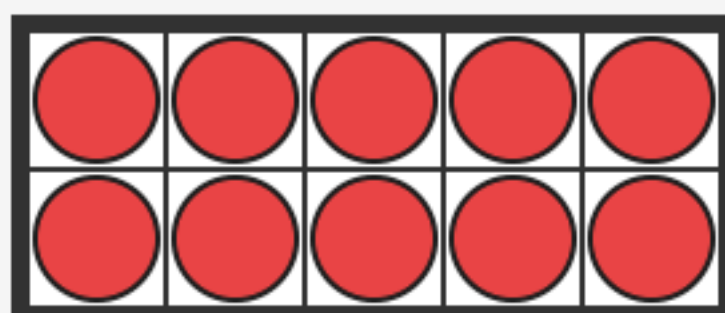
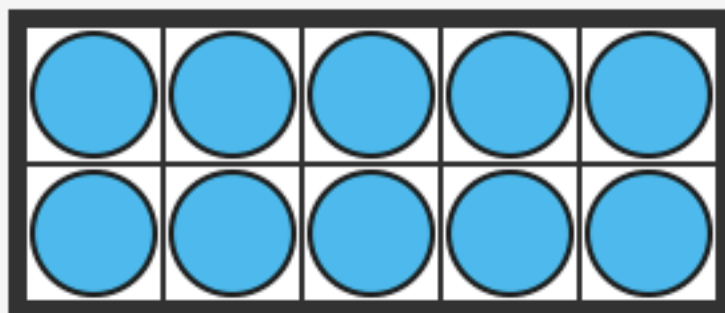
And if a whole were
one full ten frame
then how many?



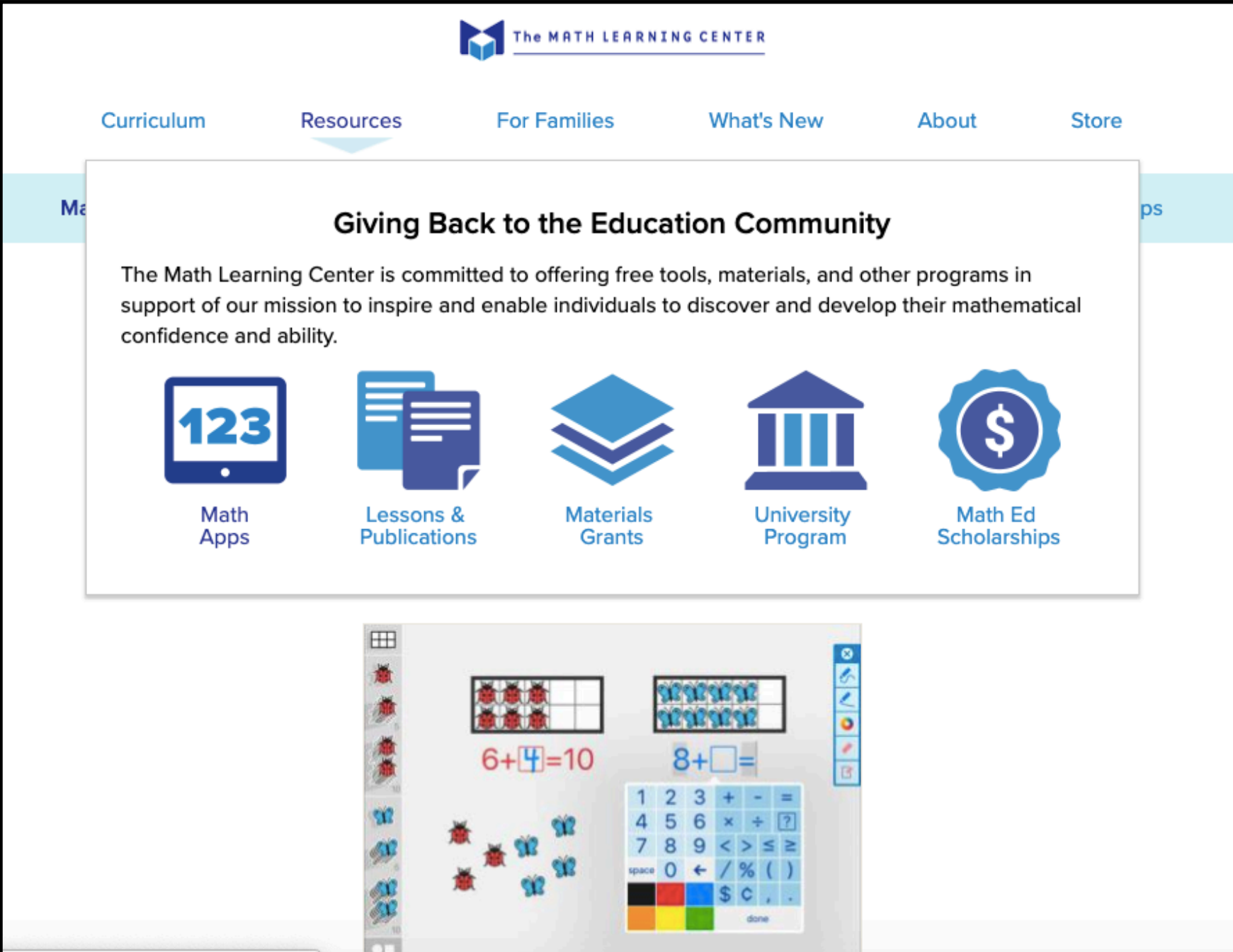
How many dots do you see?

How do you see them?

Is there a number sentence/ equation
that we could write that would match
how _____ determined how many
dots there were?



Let's check out a FREE digital app where
you can create images!
www.mathlearningcenter.org



The MATH LEARNING CENTER

Curriculum Resources For Families What's New About Store

Giving Back to the Education Community

The Math Learning Center is committed to offering free tools, materials, and other programs in support of our mission to inspire and enable individuals to discover and develop their mathematical confidence and ability.

- Math Apps
- Lessons & Publications
- Materials Grants
- University Program
- Math Ed Scholarships

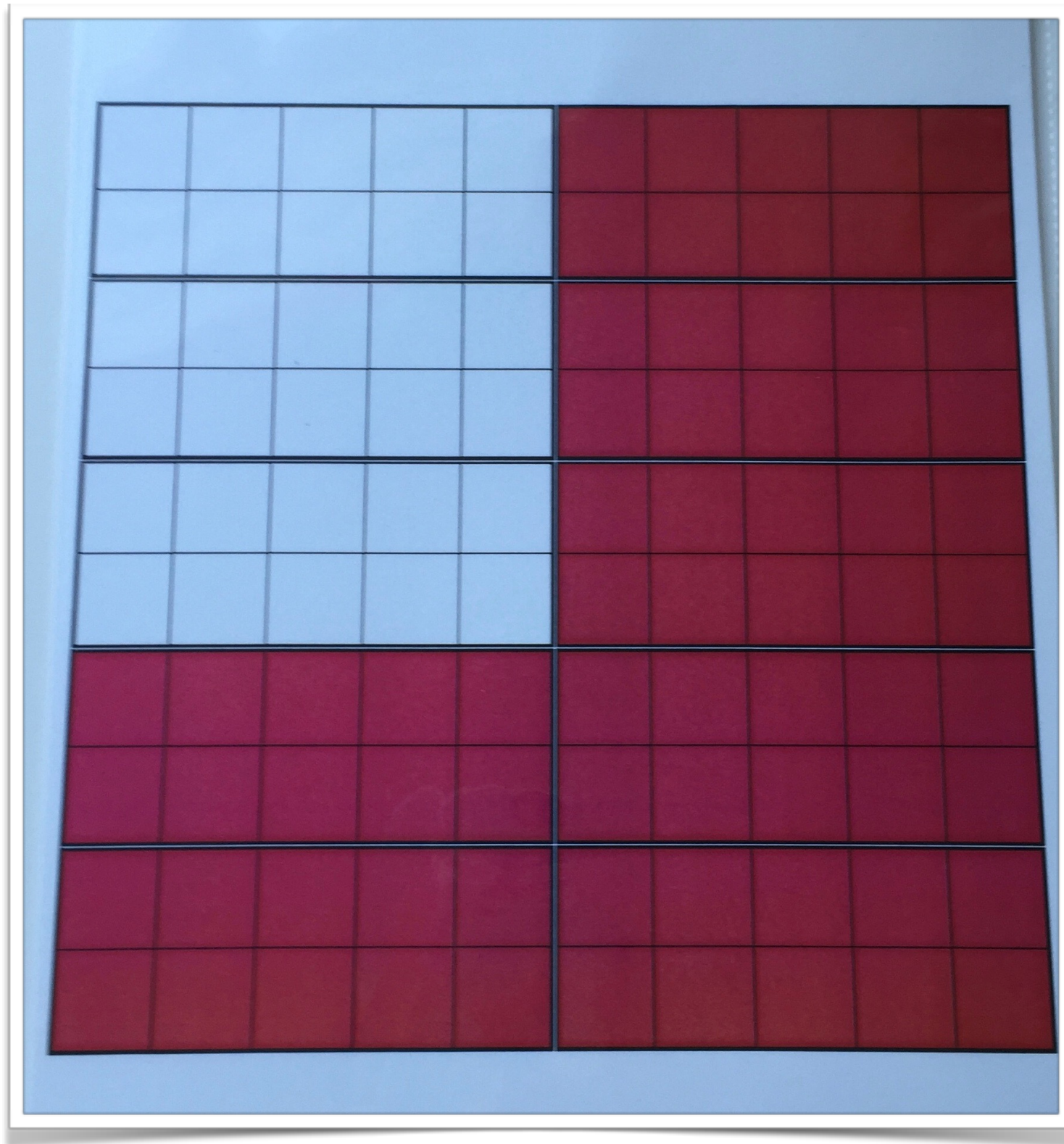
The bottom section of the screenshot shows a digital app interface with a grid of ladybugs and butterflies, a math problem $6 + 4 = 10$, and a calculator.

How many dots do you see?

How do you see them?

Is there a number sentence/ equation
that we could write that would match
how _____ determined how many
dots there were?

Hundreds Boards



How many dots do you see?

How do you see them?

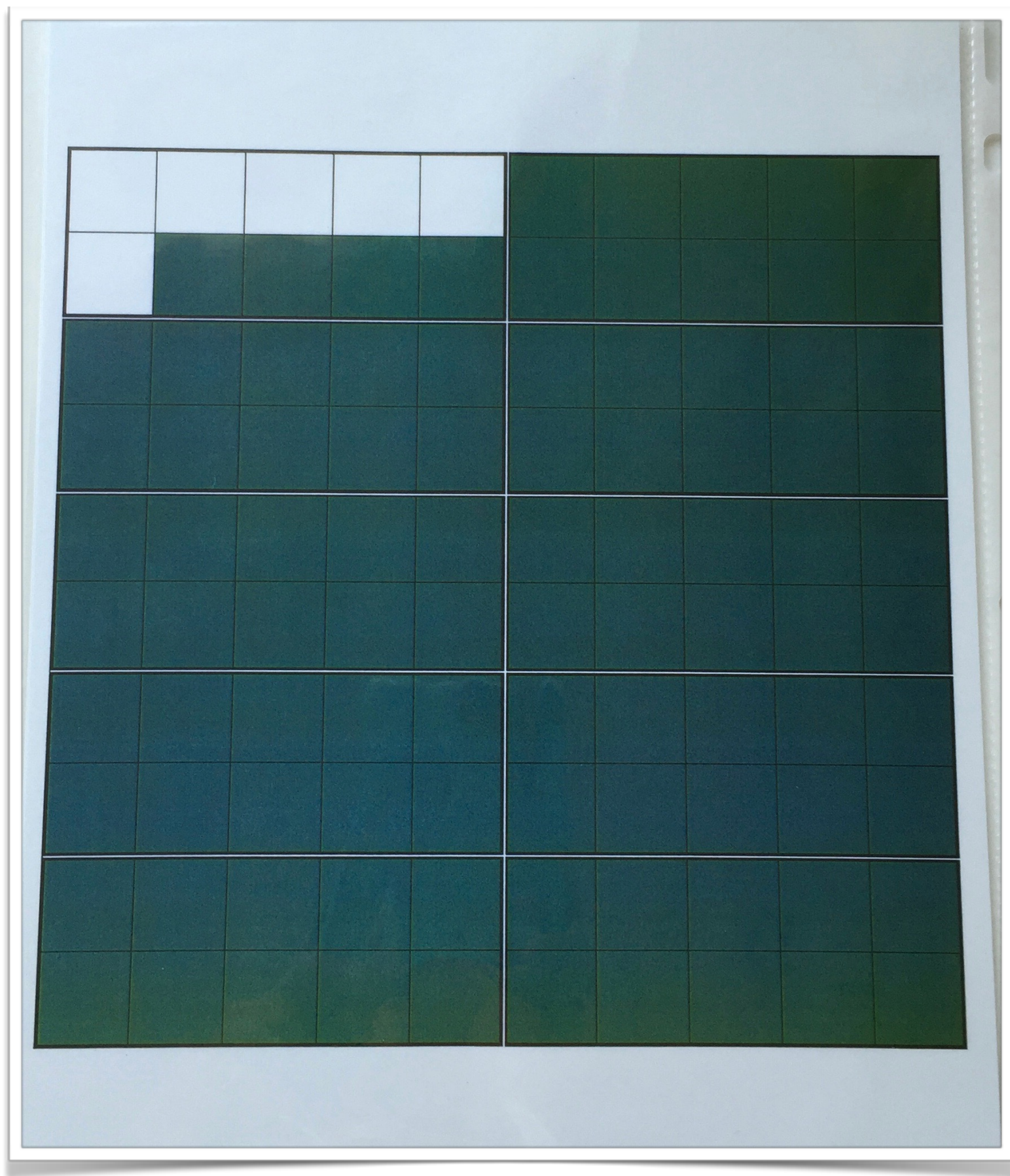
Is there a number sentence/ equation
that we could write that would match
how _____ determined how many
dots there were?

[illegible]

How many dots do you see?

How do you see them?

Is there a number sentence/ equation
that we could write that would match
how _____ determined how many
dots there were?

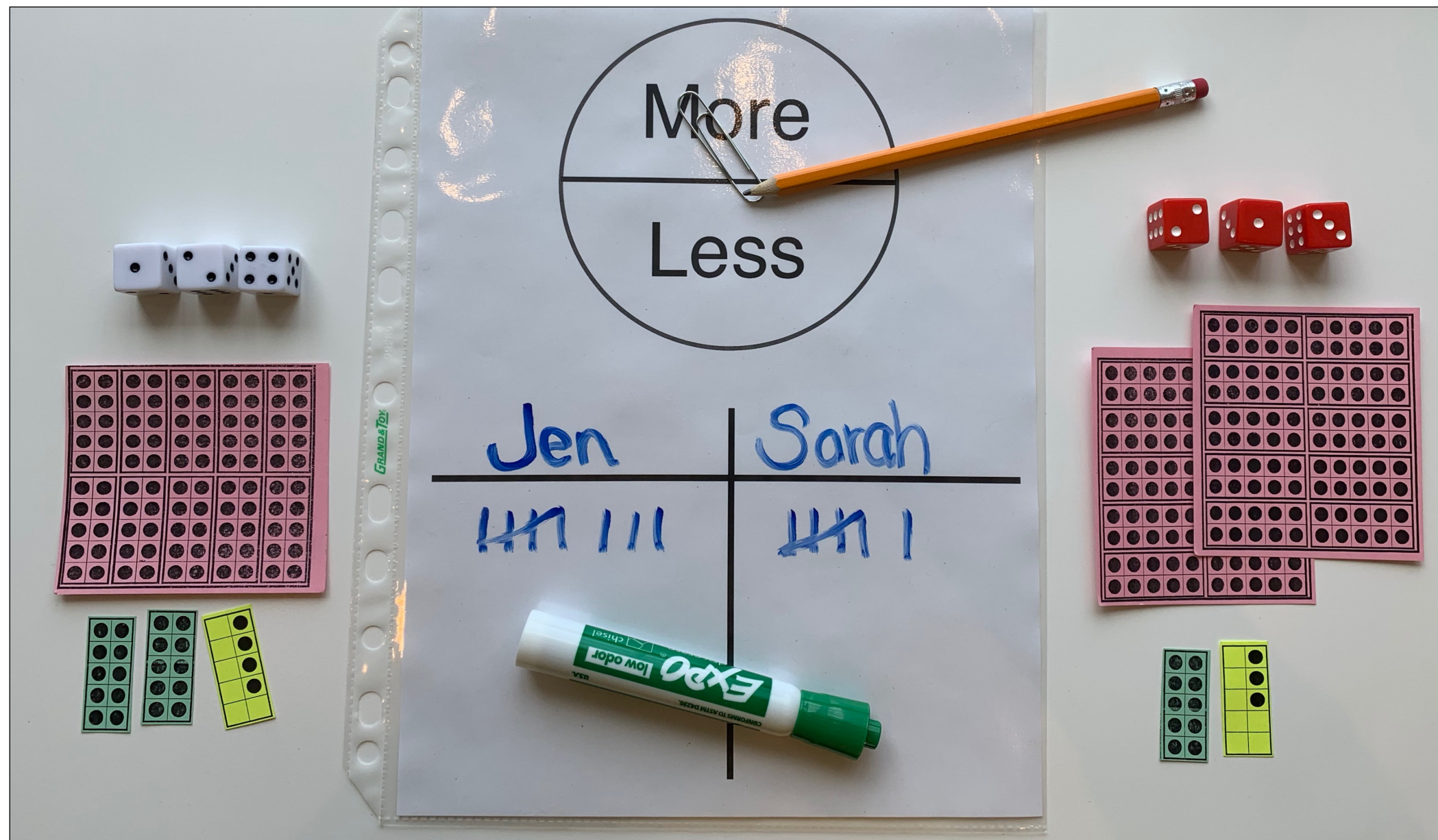


How many dots do you see?

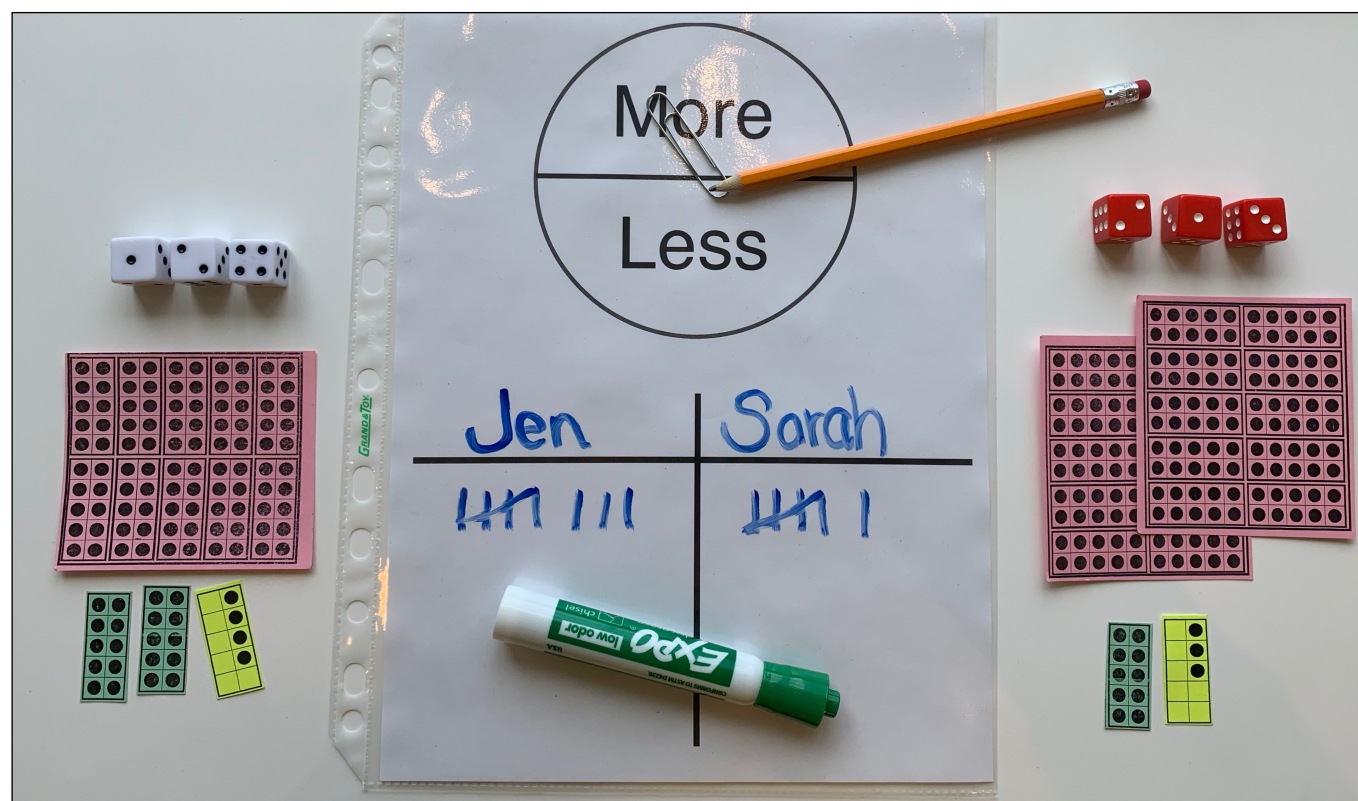
How do you see them?

Is there a number sentence/ equation
that we could write that would match
how _____ determined how many
dots there were?

More OR Less



More OR Less



Let's
play!

Shrink OR Grow

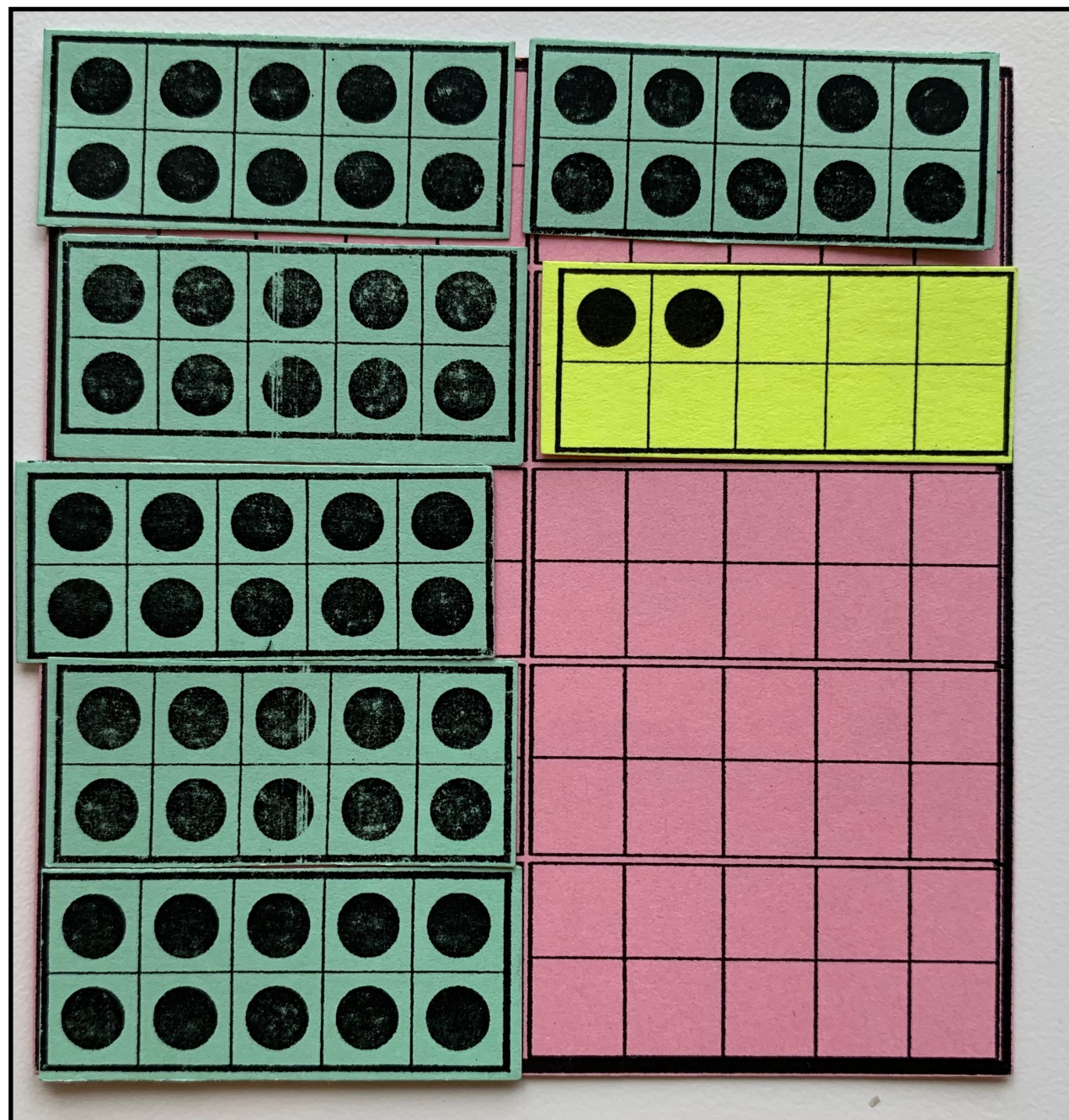


Please build 919



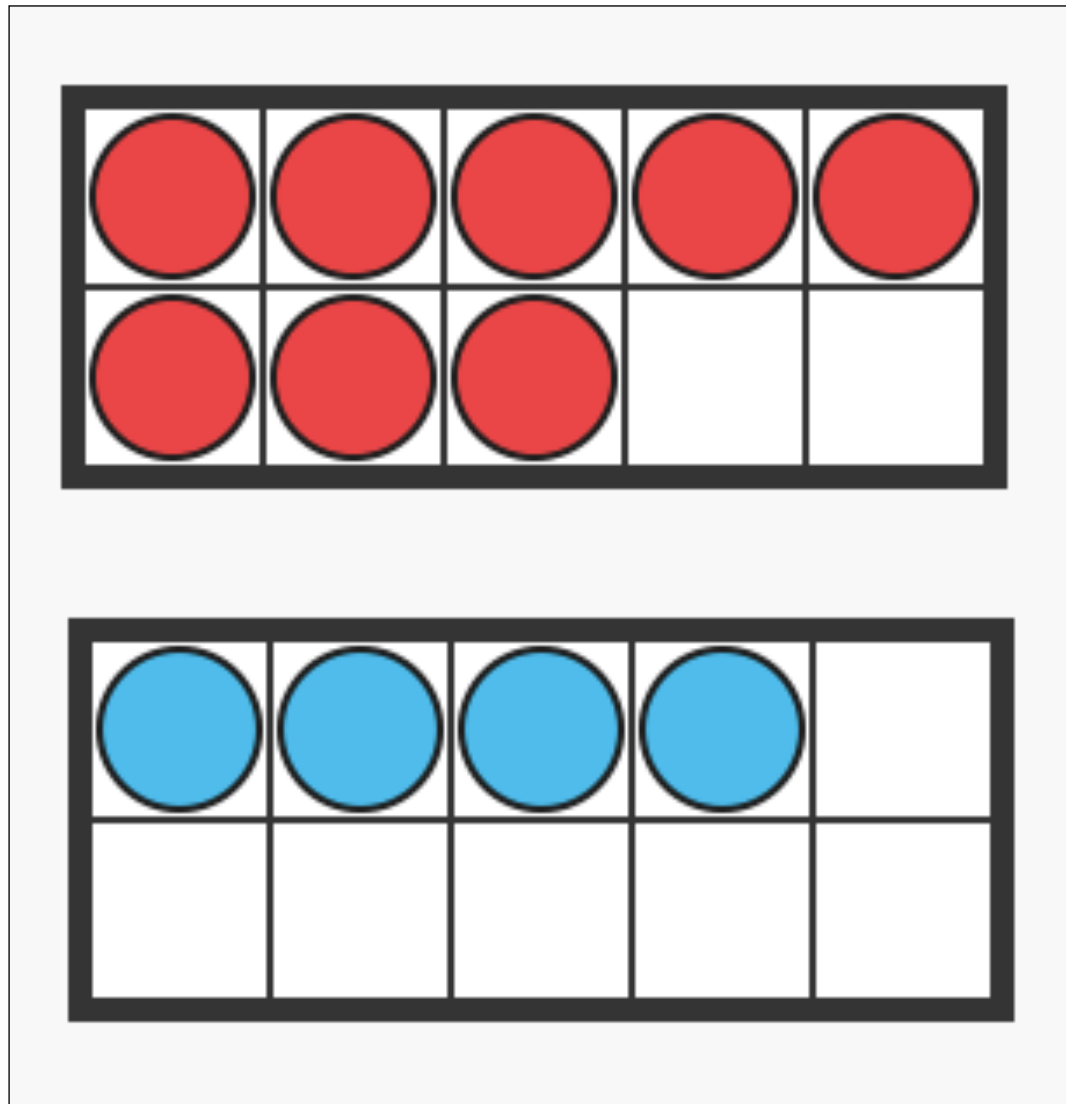
Are we shrinking or growing?
Can you make 742?

How Much More to Make
50 or 100 or .5 or one whole



Let's
play!

Single Digit Addition



Single Digit Addition

The diagram illustrates the addition of 8 and 4 using base ten blocks and a number line. On the left, there are two ten-frames. The top ten-frame contains 8 red blocks (representing 8) and 2 blue blocks (representing 2). The bottom ten-frame contains 2 blue blocks (representing 2) and 8 empty spaces (representing 8). Two green arrows point from the 2 blue blocks in the bottom ten-frame to the 2 blue blocks in the top ten-frame, showing the transfer of blocks to form a ten. To the right of the ten-frames is a hand-drawn number line. The number line starts at 8, goes to 10, and then continues to 12. The numbers 8, 10, and 12 are written on the line. The number 4 is written above the line, and the number 2 is written below the line. The equation $8 + 4 = 12$ is written next to the number line. Below the number line, the equation $10 + 2 = 12$ is written.

$8 + 4 = 12$

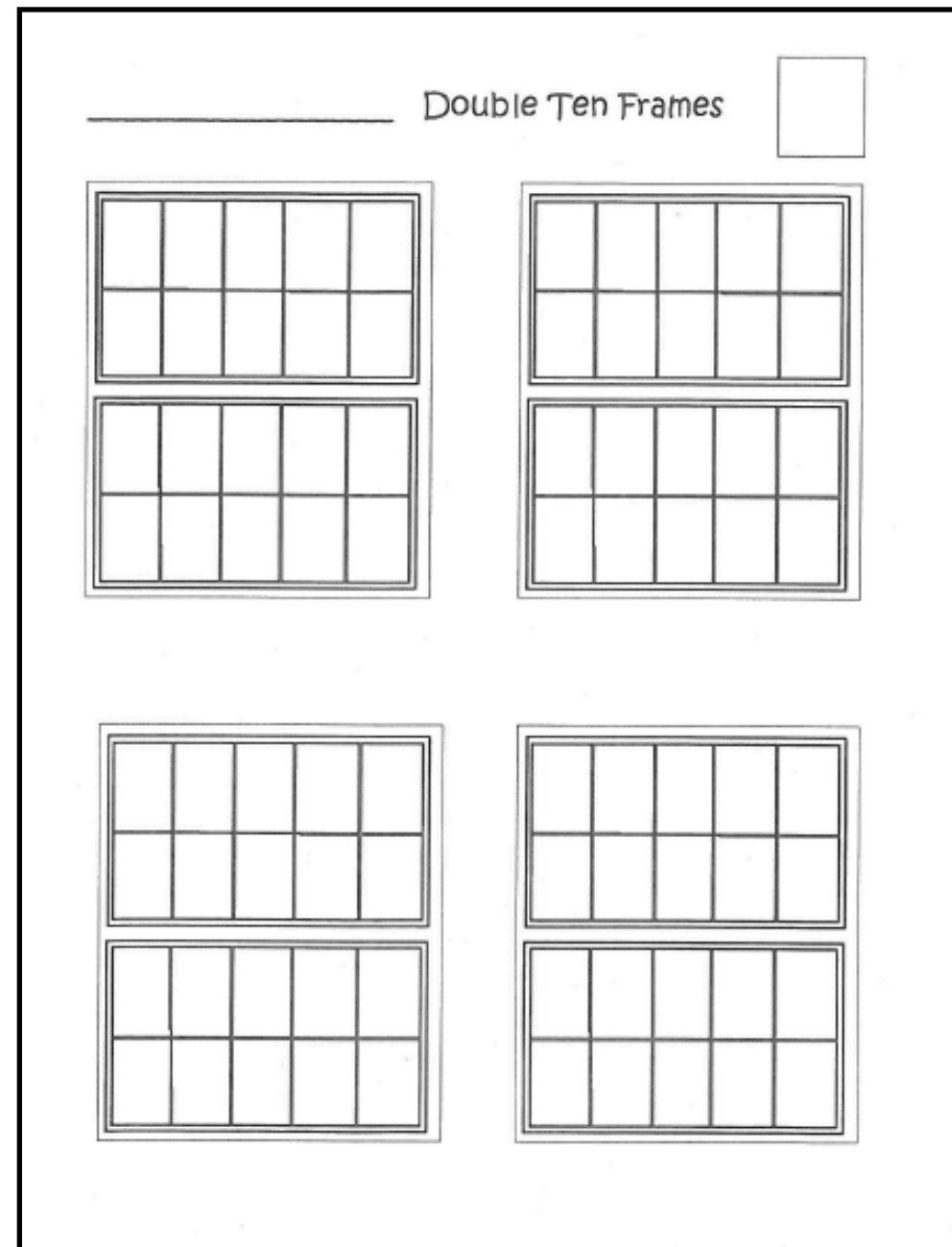
$10 + 2 = 12$

Connecting Representations

Concrete

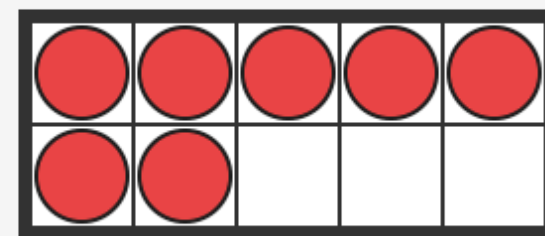
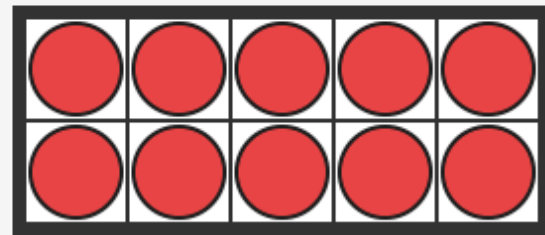
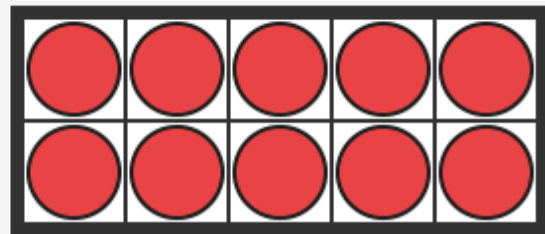
Pictorial

Abstract

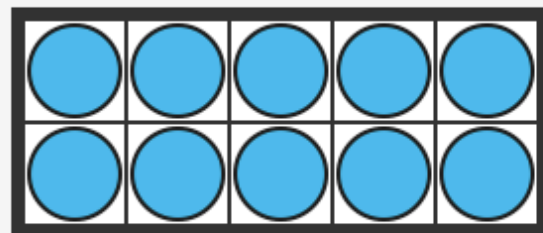
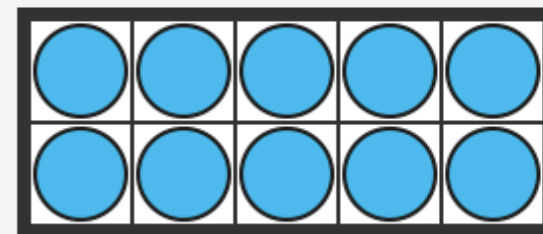


Adding to 2-digit numbers

Whole tens and hundreds

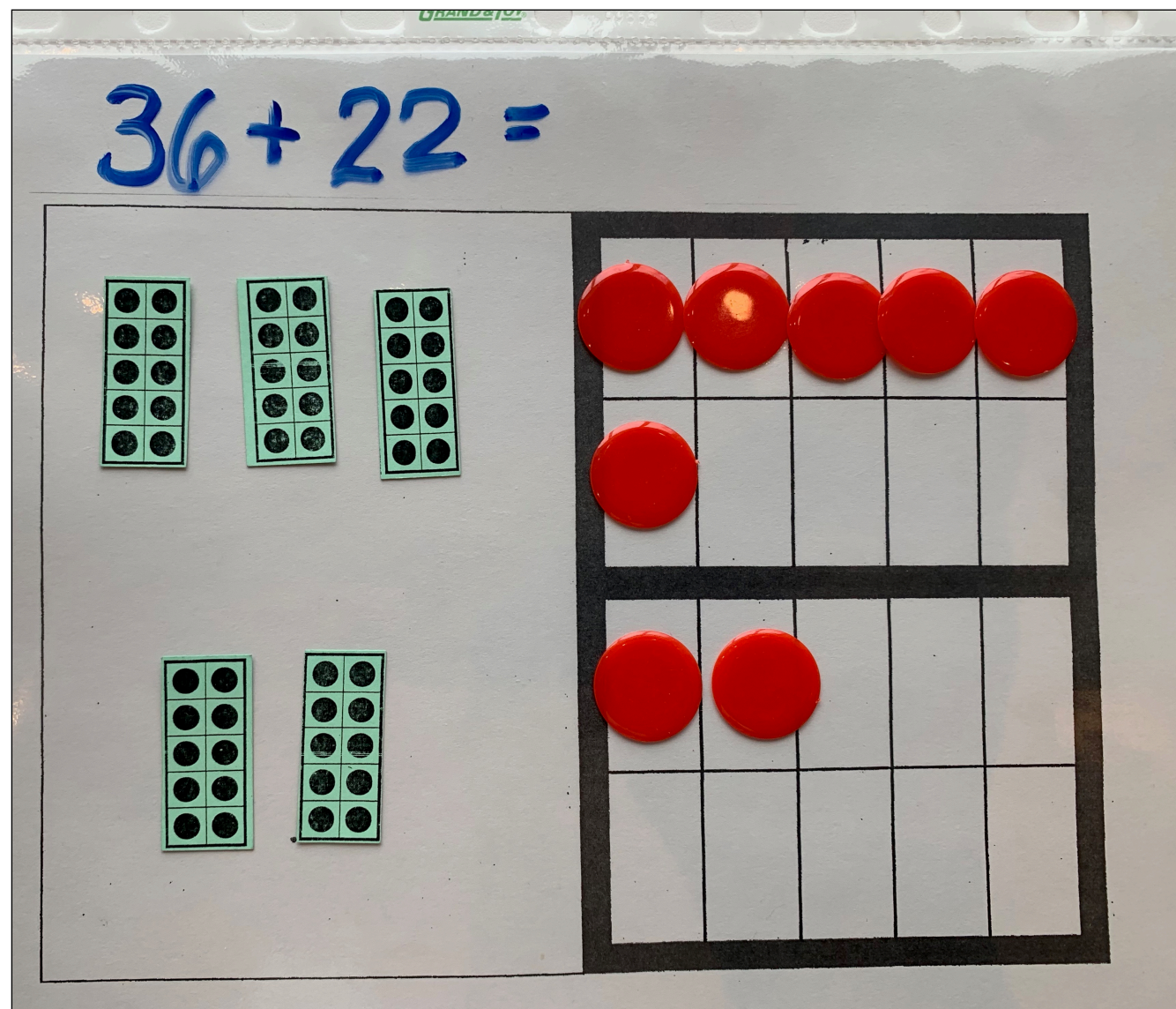


$$\begin{array}{l} 27 + 20 \\ \swarrow \quad \searrow \\ (20 + 7) + 20 = \\ (20 + 20) + 7 = 47 \end{array}$$



$$2.7 + 2.0 = 4.7$$

Adding tens and ones without regrouping



Adding tens and ones with regrouping

$3.6 + 2.5 =$ or $36 + 25 =$

The image shows a base ten block model and a place value chart for the addition of 36 and 25. On the left, there are three tens rods (each with 10 dots) and six ones units (each with 1 dot). On the right, a place value chart with two rows (tens and ones) and five columns is shown. The top row (tens) has five green circles, and the bottom row (ones) has five blue circles. This represents the sum of 36 and 25, which is 61.

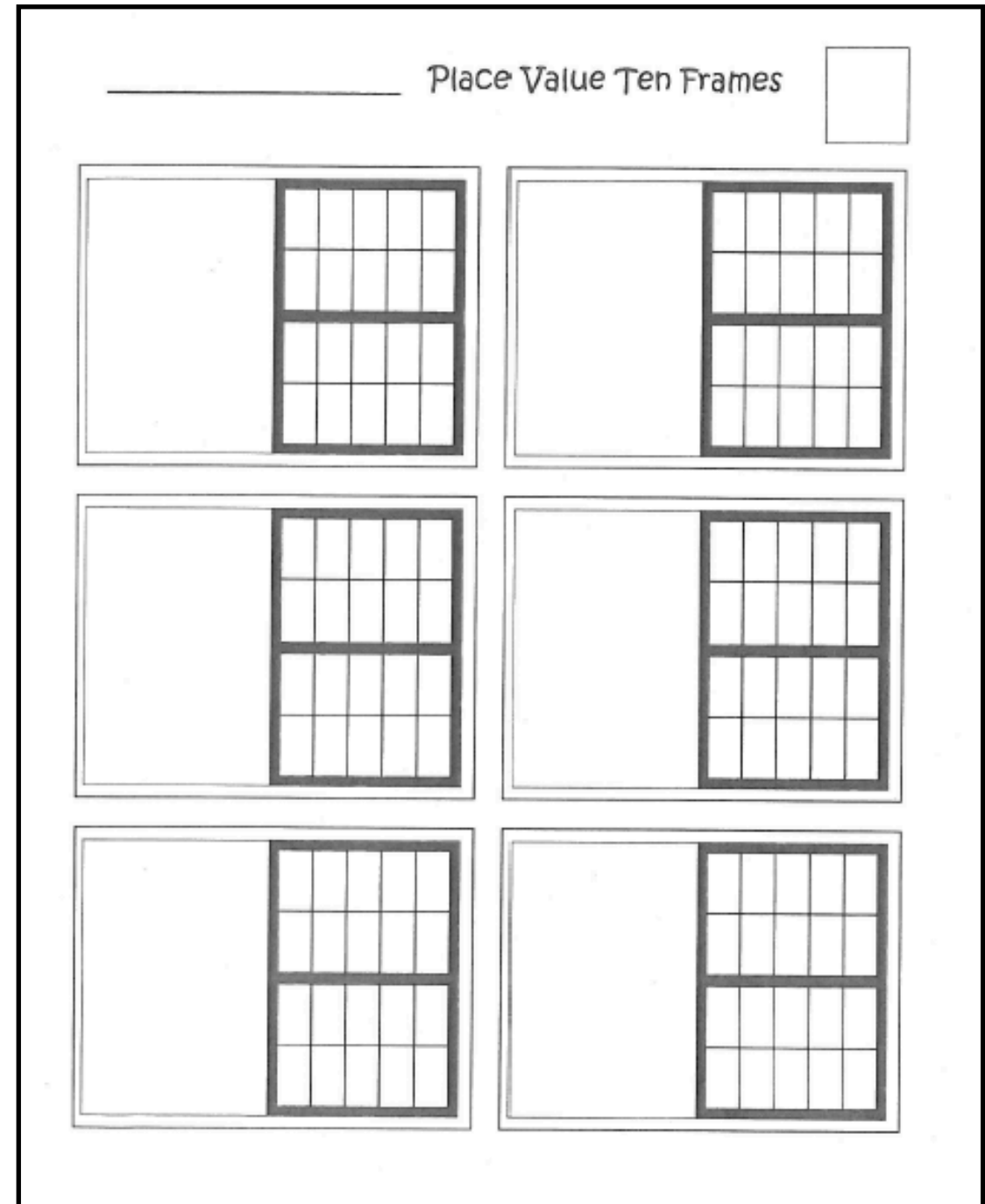
Tens	Ones
5	5

Connecting Representations

Concrete

Pictorial

Abstract



you
are
amazing

REMEMBER THAT.