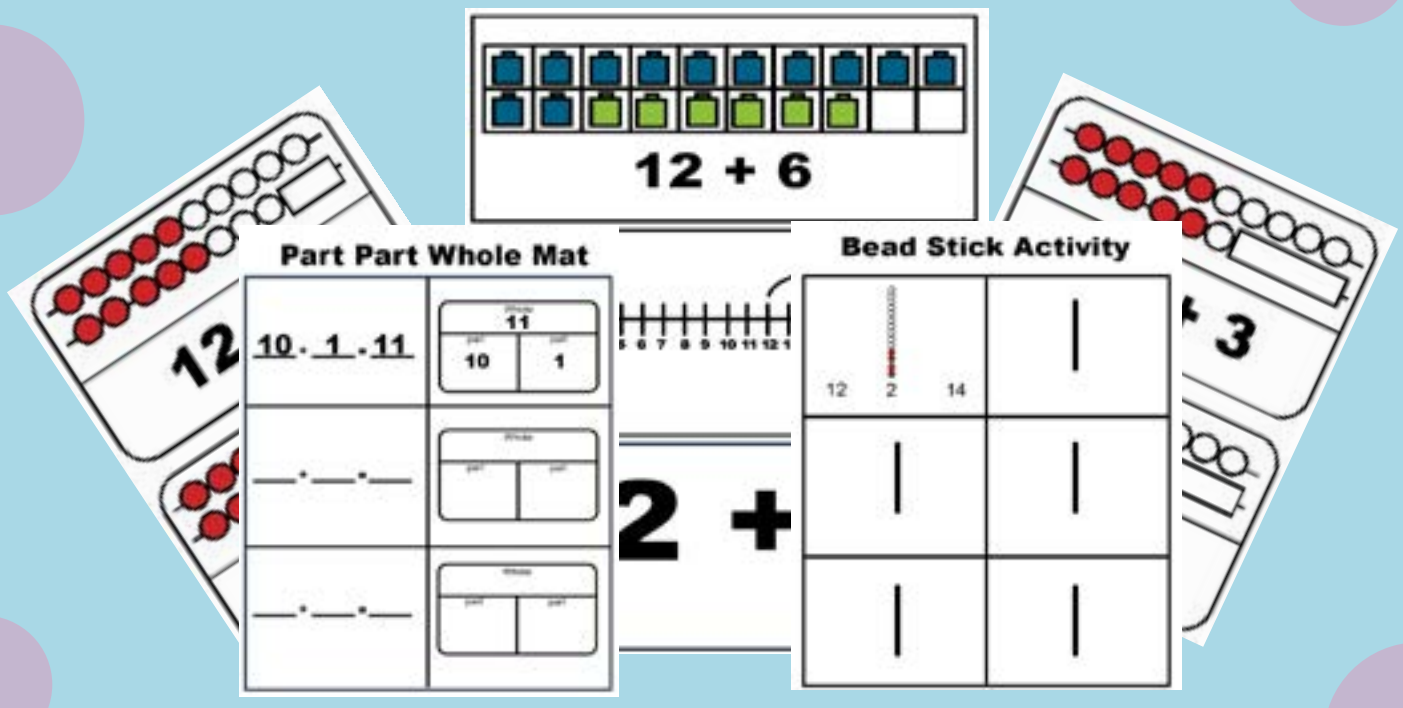
DR. NICKI NEWTON'S

MATH FACT FLUENCY

WORKSTATIONS

#32

ADDING WITHIN 20



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DEDICATED TO MOM AND POPS, ALWAYS

TABLE OF CONTENTS

PREFACE

Why I wrote this book

I wrote this Fluency Practice series because I believe that workstations provide a powerful possibility for improving student achievement. Scaffolding curriculum experiences for students to practice in their zone of proximal development is one of the ways that we move student achievement. I wrote this book series specifically to show what it looks like to scaffold fluency workstations at the concrete, pictorial and abstract levels along the learning trajectory for addition and subtraction.

How to use this book

Each book is divided into 3 parts: The General Overview, The Activities, The Assessment. This book has all the resources to build the Adding within 20 Workstation. Teachers should print out and laminate a variety of concrete, pictorial and abstract activities. There are many activities to choose from, however it is not necessary to put all of the workstations out at once. There should be a variety of activities though at all times. This book is to be used as part of a fluency journey. Each book in the series focuses on practice activities for a targeted strategy.

What Are Differentiated Fluency Workstations?

A workstation is a space for students to practice what they are learning and what they are supposed to know. They practice in different ways. Sometimes they practice by themselves, sometimes they practice with a partner and other times they practice in a small group. They can play various types of games as well as do different activities and projects. All of the activities should be meaningful, standards-based and rigorous.

A differentiated fluency workstation is a space for students to work on their basic fact fluency. The stations are organized around the learning trajectories for addition and subtraction. Students take an assessment to see where they should begin the work and then they start at that strategy. They spend time doing various activities around a specific strategy and then they take an assessment and if they show proficiency, they move to the next strategy.

Workstations are not busy work. Workstations are not worksheets. Workstations are not supposed to be boring or frustrating. They are spaces to learn, to grow, to be challenged and to stretch. They are familiar. Students should never be at a workstation that they don't understand. Great workstations allow students to solidify their content knowledge and skills through purposeful practice in the student's zone of proximal development (Vygotsky, 1978).

What does the research say about independent practice?

Teachers must understand the key ideas that their students' need to know and the skills that they must be able to do and how these concepts connect with what came before and what comes next (Ma,1999). Teachers need to not only know what the concepts are but how to best teach them to the students. What are the learning trajectories required to fully understand the concepts and be able to do the math. Ontario Ministry of Education states that the big ideas also act as a 'lens' for: Making instructional decisions; identifying prior learning; looking at students' thinking and understanding in relation to the mathematical concepts addressed in the curriculum; collecting observations and making anecdotal records; providing feedback to students; determining next steps; communicating concepts and providing feedback on student's achievement to parents (p.4).

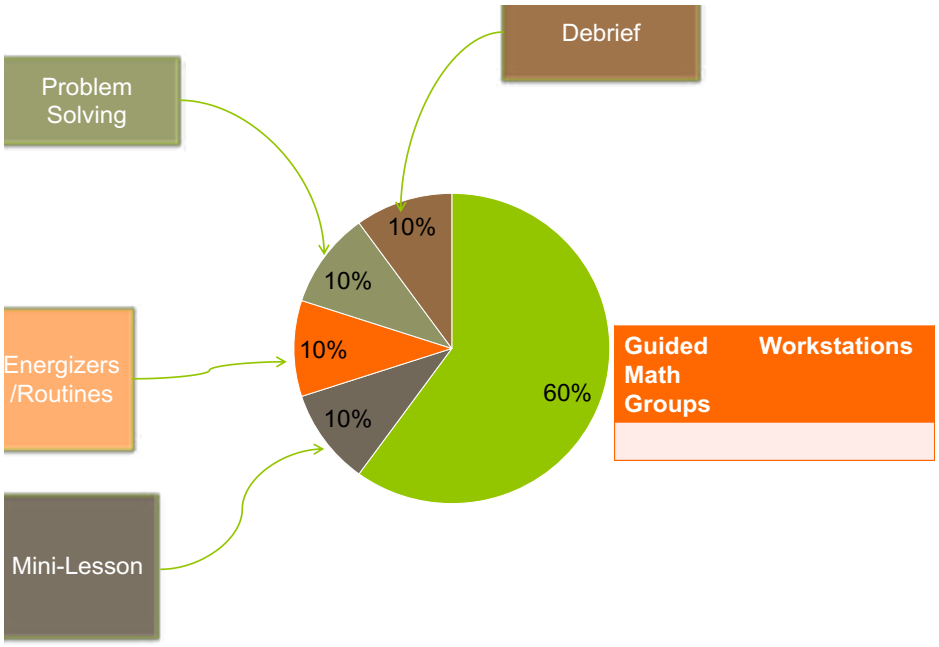
Why should students work in their zone of proximal development?

There is a developmental trajectory for learning math facts (Baroody, 2006; Batista, 2016). Instruction should follow it. Too often we jump from one topic to the next without students really ever having time to practice and own mathematical understandings. Differentiating fluency workstations allows students to practice in their appropriate zone so that they understand one concept before they are rushed to the next. Math topics build on each other. We know that you need to know how to do doubles before you do doubles plus 1. However, most textbooks teach these strategies back to back, not really giving the students time to understand, practice or learn much of anything.

By differentiating the workstations we allow students to practice in their zone (Vygotsky, 1976) and learn the math. The Adding within 20 workstations are scaffolded with various concrete, pictorial and then abstract activities so that students have many opportunities to practice different strategies. Van De Walle (2007) told us that we need to give students plenty of different opportuntities to practice. Differentiated workstations provide what Anghilieri (2006) calls responsive guidance. The teacher knows where the student is and then responds to that place in the learning trajectory by providing support at that level. “This guidance requires a range of support for pupils’ thought constructions, in a way that develops individual thinking as well as leading to the generation of mathematically valid understandings.” In terms of differentiated math workstations, responsive guidance is about teachers responding to students’ stages of understanding through intentional learning opportunities and practice. Teachers scaffold the learning landscapes.

A QUICK OVERVIEW OF WHEN STUDENTS DO WORKSTATIONS

Workstations can be done as part of a math workshop or they can be done as part of a regular math program that isn't in a workshop format. Either way, the purpose of math workstations is for the students to have an opportunity to do purposeful, meaningful, independent practice. I highly encourage people to do a Math Workshop format. I have written a book on Math Workshop (which details all aspects). In a Math Workshop there are 3 parts:



Opening:

•Energizers and Routines
•Problem Solving
•Mini-Lesson

Student Activity

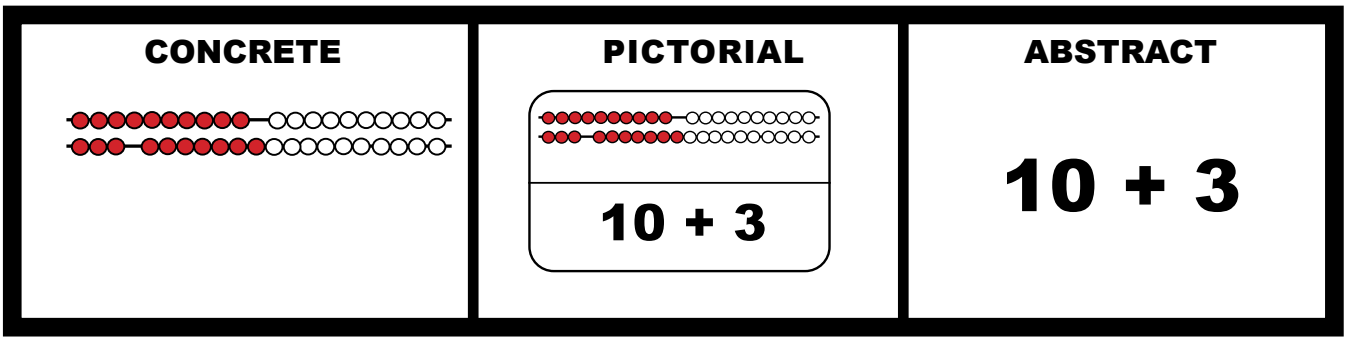
•Math Workstations
•Guided Math Groups

Debrief

•Discussion
•Exit Slip

What do they look like?

Scaffolded workstations are organized according to the learning trajectories. They have 3 components, concrete, pictorial and abstract activities.



How do you manage them?

The fluency workstation is one of the 4 must have workstations (fluency, place value, word problems and the current unit of study). Students visit these workstations in a workstation rotation or as a choice on a menu. It depends how many minutes the math block is on how many rotations are done in a day or a week. There are many ways that teachers build schedules. There can be schedules that are written on chart paper or digitally. Digital schedules allow for the teacher to have an ongoing record of what is happening as well quickly make adjustments. Also, the digital timer can be right there on the screen. Look here for ideas: https://www.pinterest.com/drnicki7/math-workshop-schedule-boards/

How do you know who goes where?

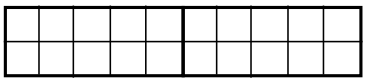
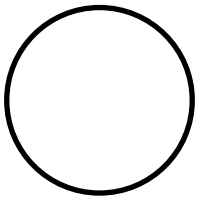
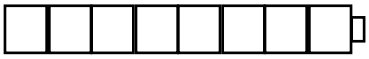
The only way to decide who goes where is to actually give a fluency assessment so that you know where the students practice level is going to be. This could be a Math Running Record. A Math Running Record is like a Fluency GPS. It is given at the beginning, middle and end of the year to find the fluency levels of the students. Find out more about Math Running Records here: https://mathrunningrecords.com

What is the role of assessment?

Assessment is the linchpin to scaffolding fluency instruction. We have to know where students are currently working at in order to correctly scaffold where they go next. In the beginning of the year teachers should give a fluency assessment in order to start students off with the right strategy work. After every strategy unit, students are given a quiz and a quick oral assessment. Throughout the unit, the teacher confers with students and takes anecdotals.

How do you make sure that students are accountable to the learning?

It is really important to have accountability measures so that you know what the students are doing. Oftentimes this is a recording sheet. Other times, students just write down in their journals the work they are doing. Here are some examples of the recording sheets.

TEN FRAME	NUMBER BRACELET	CUBE MATH
 _____+_____=_____	 _____+_____=_____	 _____+_____=_____

How do you keep track?

You should have a sheet to know which stations students are currently working on and also which ones they have completed. Teachers want to have individual data about the workstations, class data about the workstation and it is also good to look at grade data about the workstations. Some workstations should be used throughout the grade level so that there is consistency across the grade in terms of the content that students are exposed to. Grade Level teachers should decide what is going to be done across the grade for the workstation by everyone and then what is free choice. Everybody has the basics and then they can add on to that as they choose. For example, it is important to be able to discuss fluency across different data sets and how different activities are impacting student achievement levels. So having agreed upon practice experiences benefits everyone in the grade.

Class Snapshot

	Adding Zero/One	Counting On	Adding within 5/ Make 5	Adding within 10/ Make 10	Adding 10	Make 10	Doubles	Doubles +1	Doubles +2	Bridging 10	Adding Higher Facts	Review
Luke												
Tom												
Maritza												

WHAT IS THE ROLE OF PARENTS/GUARDIANS?

Helping Parents/Guardians Help Their Students

Parents play a key role in fluency. Parents need to know what the landscape of learning looks like and where their child is on that landscape. Parents need to know what is the next step and how they can best help their child to achieve that.

Dear Parent,

Your child is working on adding within 20 using a variety of strategies. We have sent home some tools, some flashcards and a game board to practice. Please work with your child by acting out the problems on the rekenrek, by working with first the visual flashcards and then the regular flashcards and by playing the board game. As we are working towards grade level fluency, we will go the cycle of concrete, pictorial and abstract learning so that students can learn their facts.

Math Note:
The math research tells us that fluency has 4 components: accuracy, flexibility, efficiency and appropriate strategy selection. With intentional, purposeful practice, automaticity will come.

Adding within 20

Big Ideas: There are a variety of strategies and models to use when doing addition.
Enduring Understanding: It is important to look at the relationships between and among numbers.
Essential Questions: How we use addition in real life?

ADDING WITHIN 20 ACTIVITIES

Concrete Activities Pick 3	Pictorial Activities Pick 3	Abstract Activities Pick 3
Flashcard Ten Frame Build It!	**Flashcard Ten Frame** Draw it!	**Flashcard Ten Frame** Write the Equation!
Number Bracelet Build It!	**Number Bracelet** Draw it!	**Number Bracelet** Write the Equation!
Rekenrek Build It!	**Rekenrek** Draw it!	**Rekenrek** Write the Equation!
Cube Tower Build It!	**Cube Tower** Draw it!	**Cube Tower** Write the Equation!
Bead Stick Addition Build It!	**Bead Stick Addition** Draw it Facts!	**Bead Stick Addition** Write the Equation!
Part-Part Whole Mats Build It!	**Part-Part Whole Mats** Build it and Draw it!	**Part-Part Whole Mats** Write the Equation!
Story Mats Act it out!	**Story Mats** Draw a picture!	**Story Mats** Write the Equation!
Number Bond Adding Machine Build It!	**Number Bond Adding Machine** Draw it!	**Number Bond Adding Machine** Write the Equation!
Domino, Count and Sort Build it Domino Facts!	**Domino** Draw a fact!	**Domino** Write the Equation!
More Activities		
Assessment Give a quick performance test and interview (ask the students to model, show and tell you some of the adding within 20 facts).		

Ten Frame Activity

Goal
Students focus on adding within 20.

Way to Play
Students pick a flashcard and model it on a twenty frame.

Materials

Scaffolded Flashcards
Unscaffolded flashcards

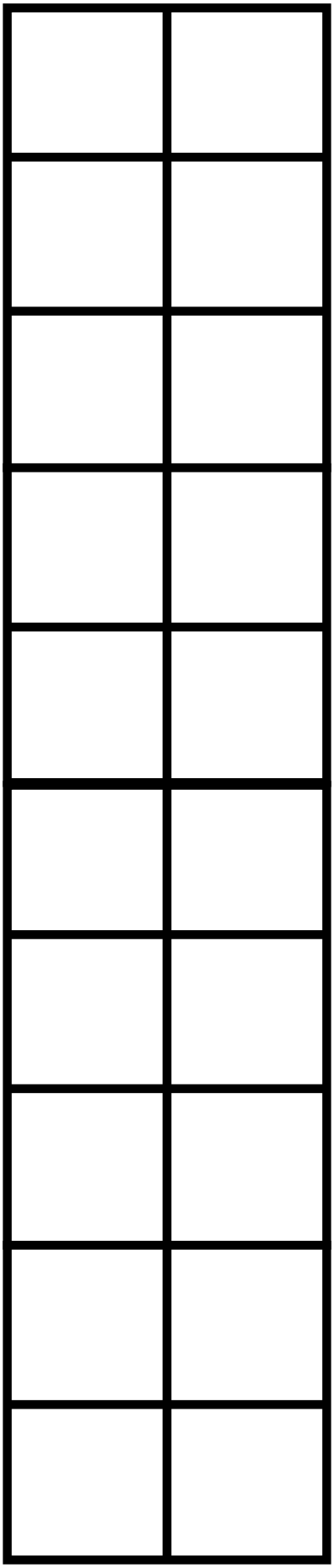
Scaffolding the Game
There are 2 sets of flashcards.
Set A: Twenty frame flashcards
Set B: Regular Adding Within 20 flashcards

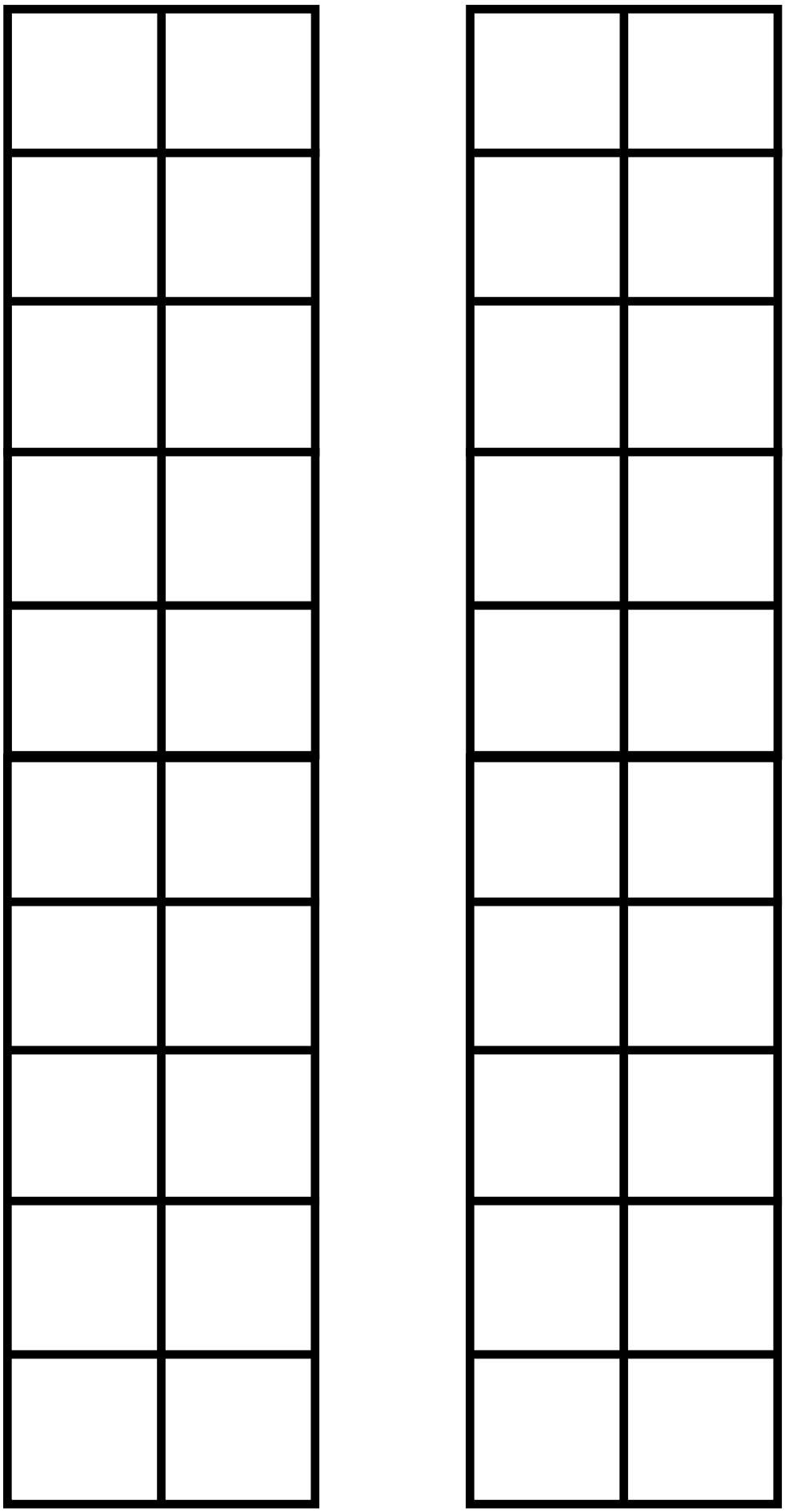
Directions

Activity 1
Pull a flashcard.
Model it on the twenty frame.
Record it on the recording sheet.
Solve.

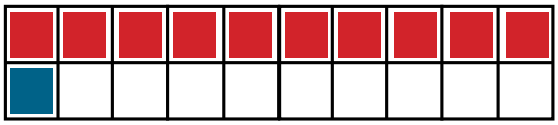
Activity 2
Pull a flashcard.
Solve.

Use your math words:
My problem was _____. I added _____ and then _____ more.
My sum is _____.





Recording Sheet



11 + 1 = ?

_____ + _____ =_____

_____ + _____ =_____

_____ + _____ =_____

_____ + _____ =_____

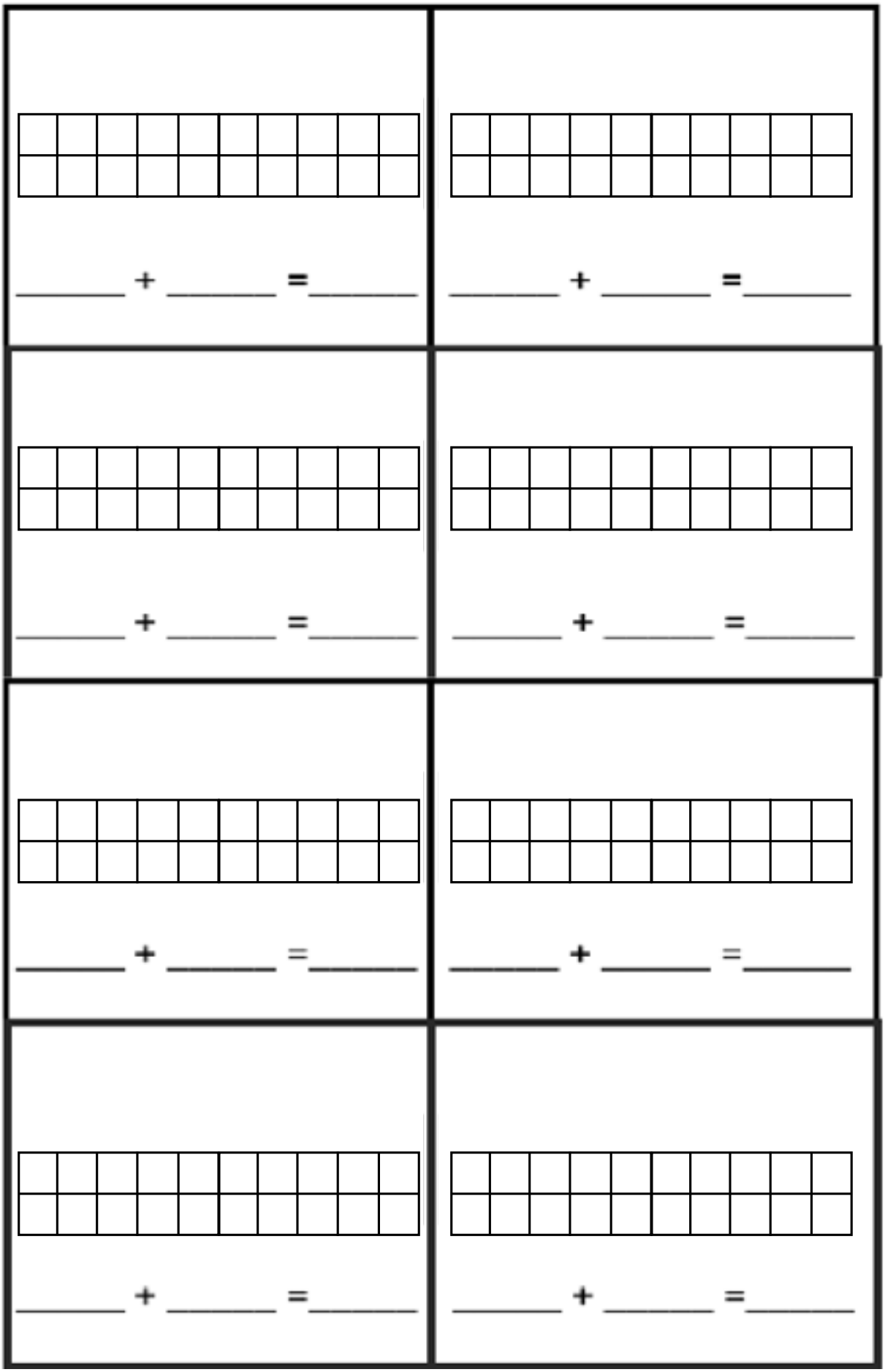
_____ + _____ =_____

_____ + _____ =_____

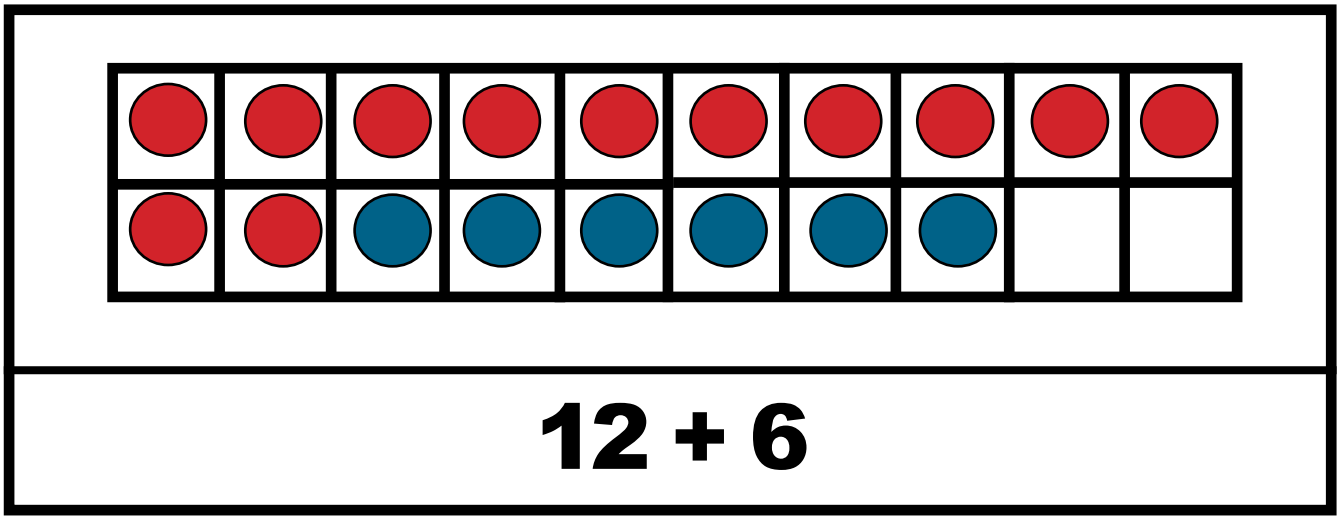
_____ + _____ =_____

_____ + _____ =_____

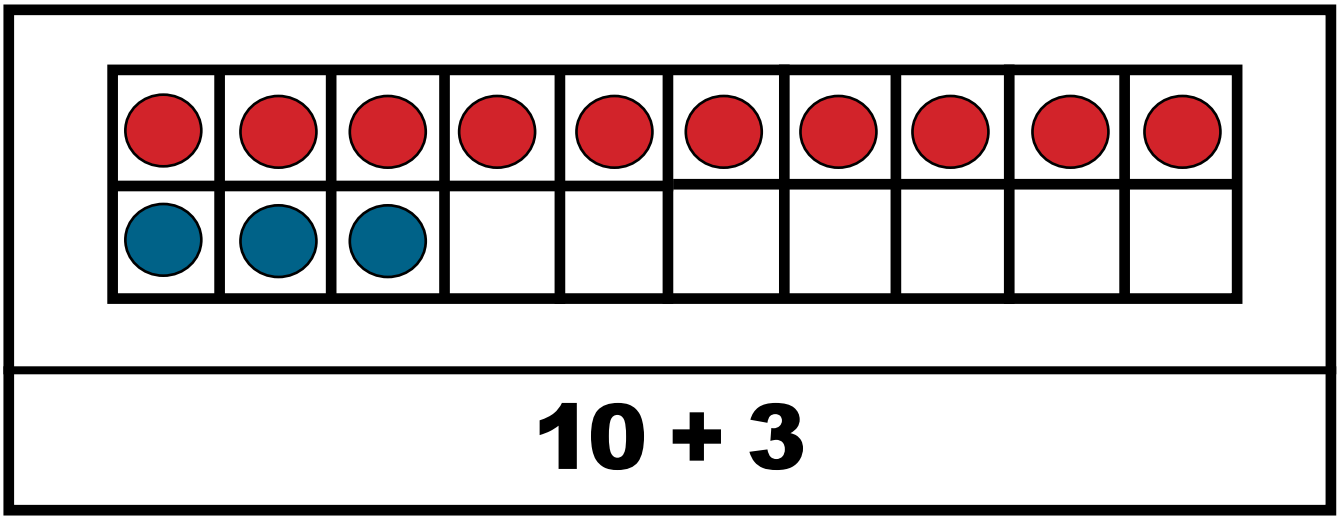
Recording Sheet



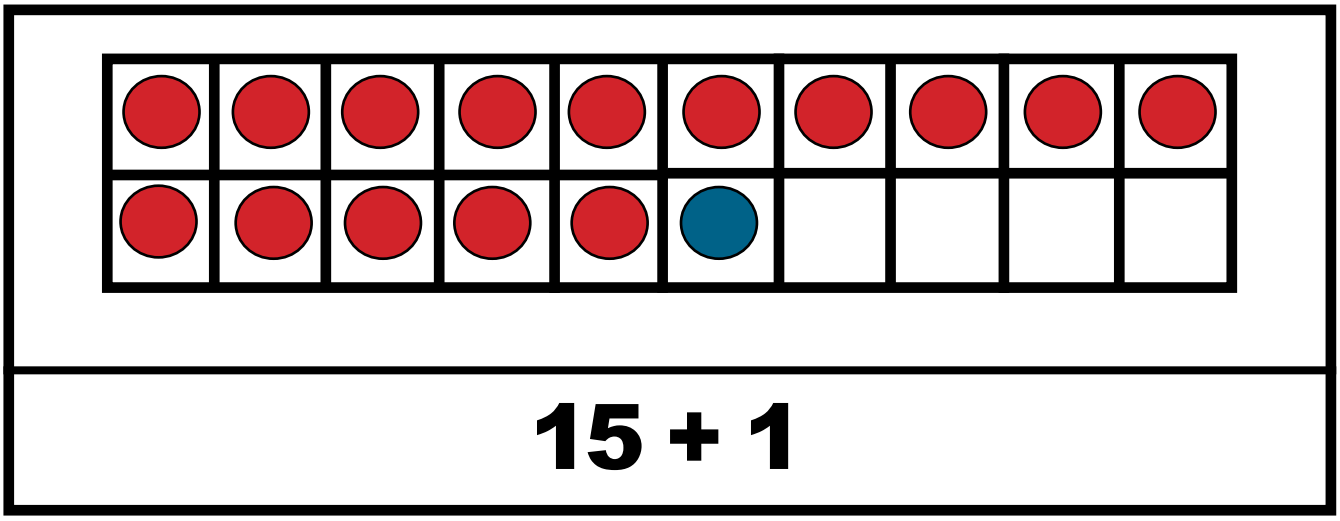
Twenty Frame Flashcards



12 + 6

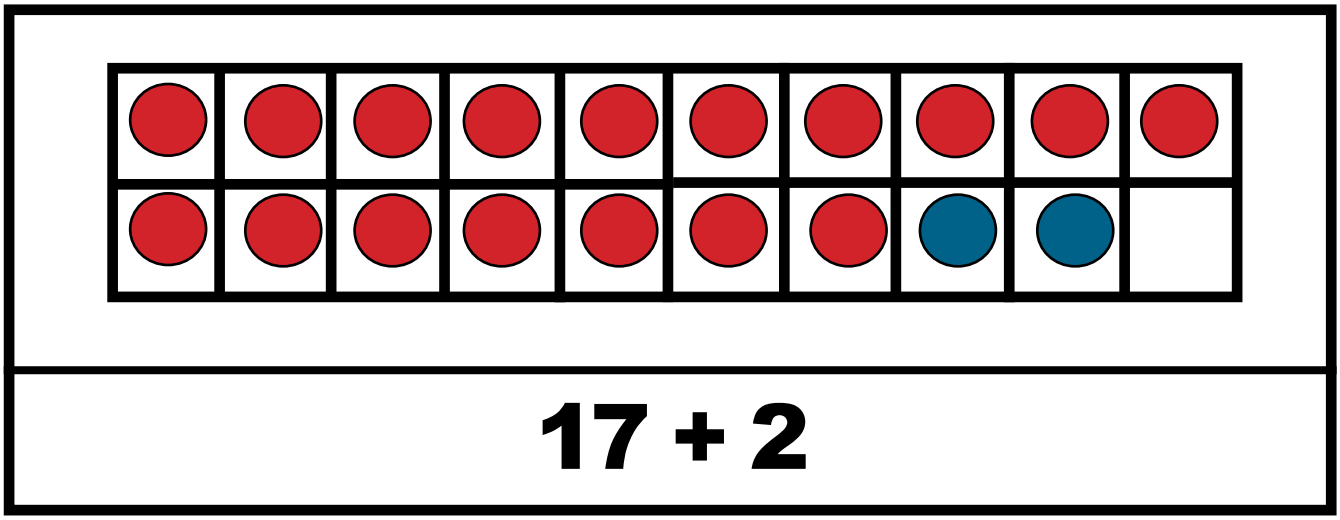


10 + 3

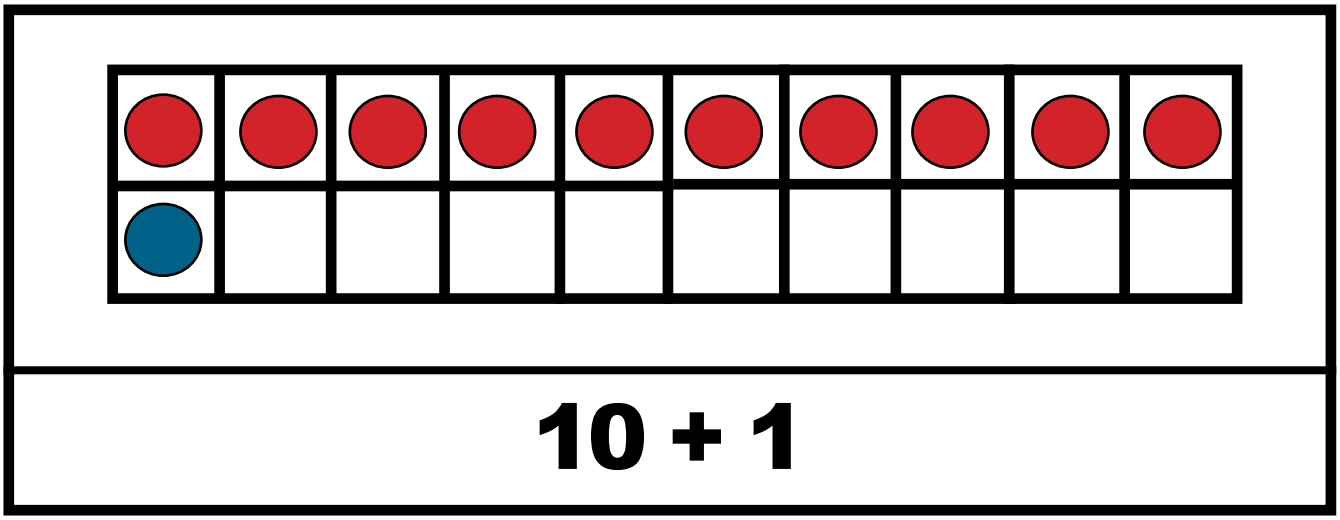


15 + 1

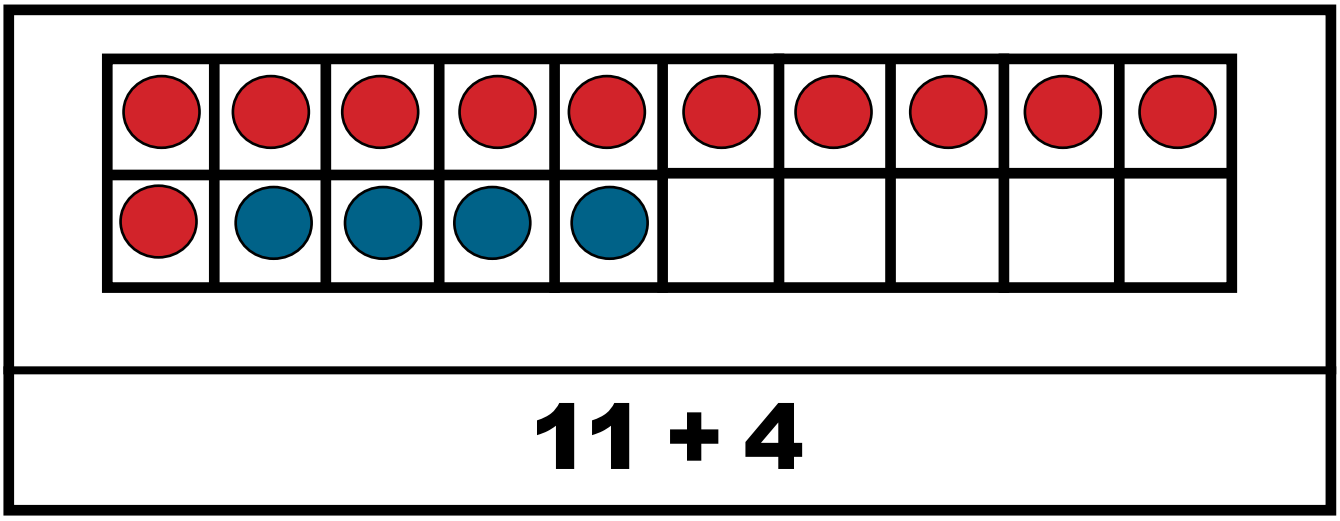
Twenty Frame Flashcards



17 + 2

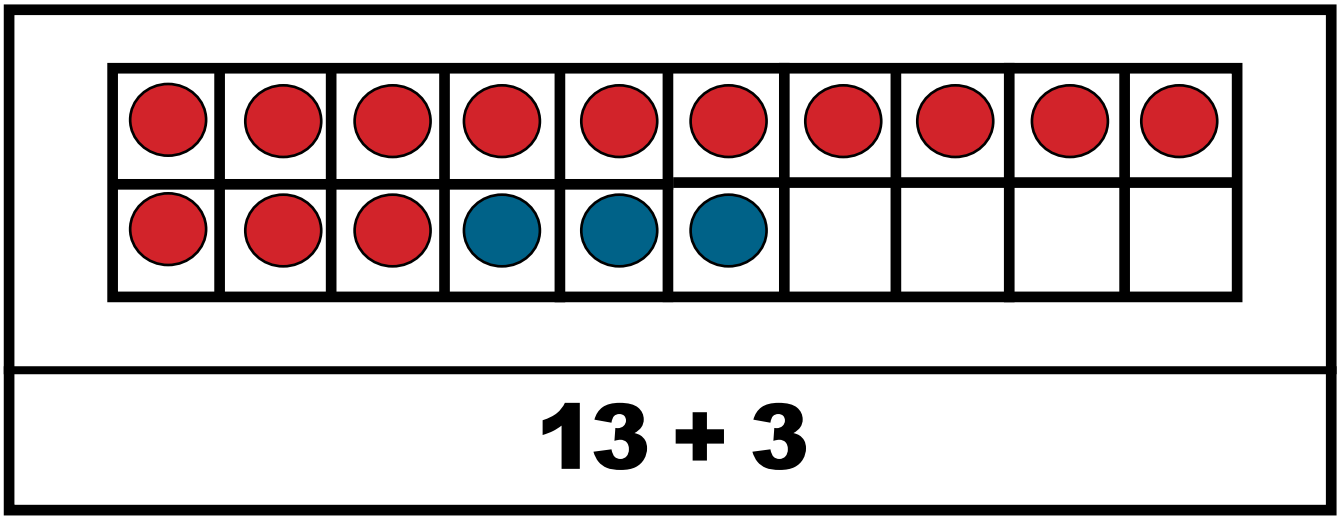


10 + 1



11 + 4

Twenty Frame Flashcards



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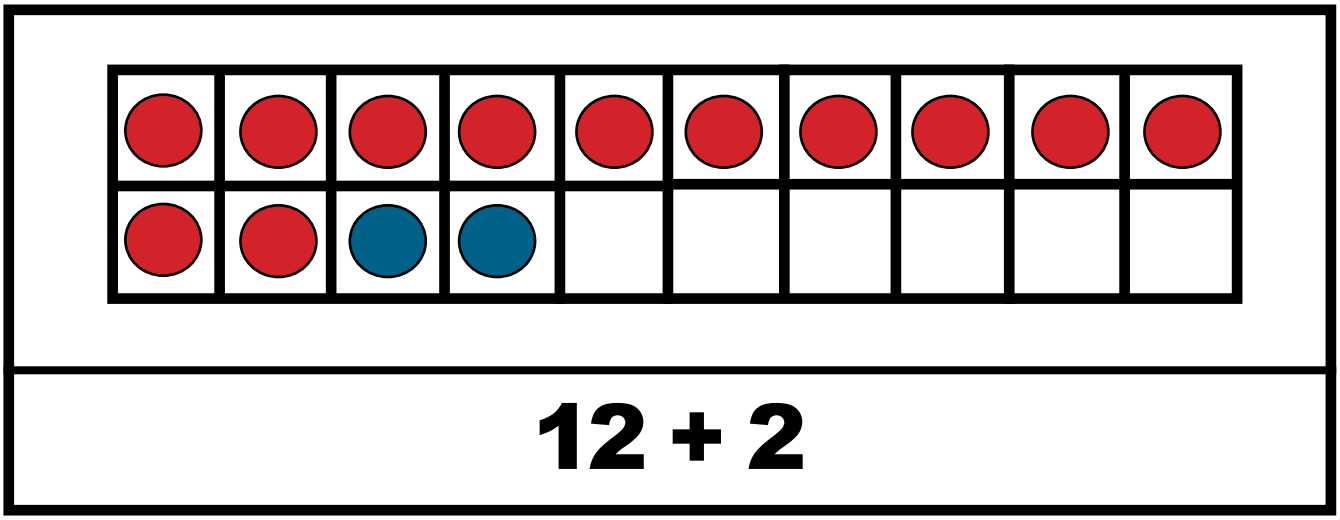
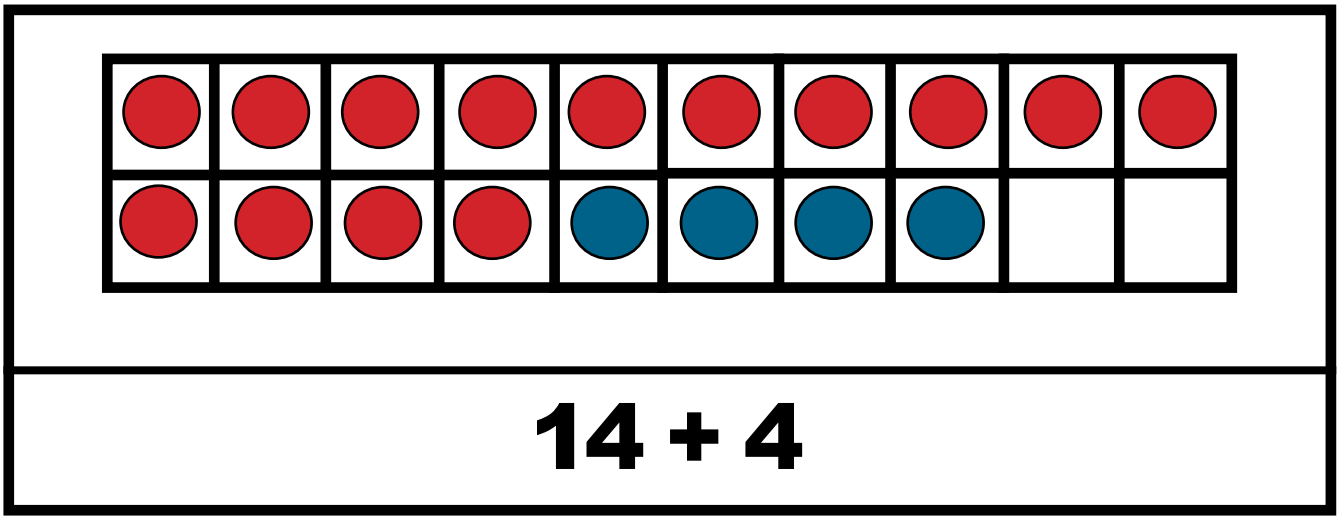
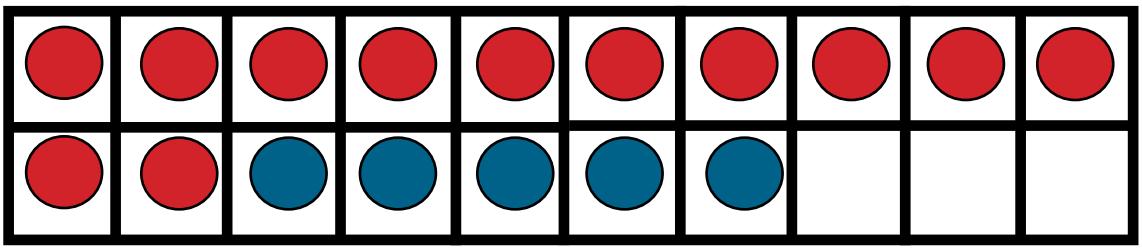


12 + 2

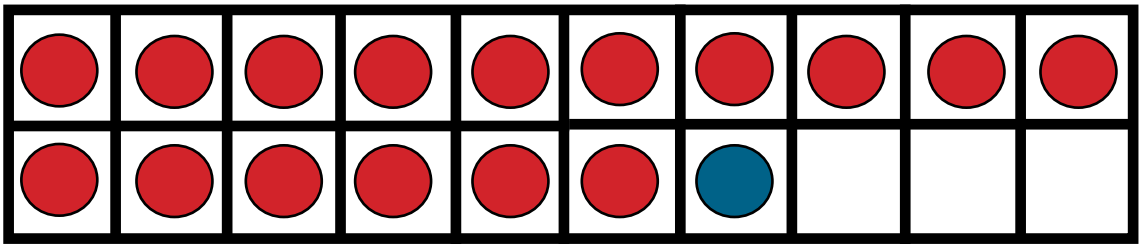


14 + 4

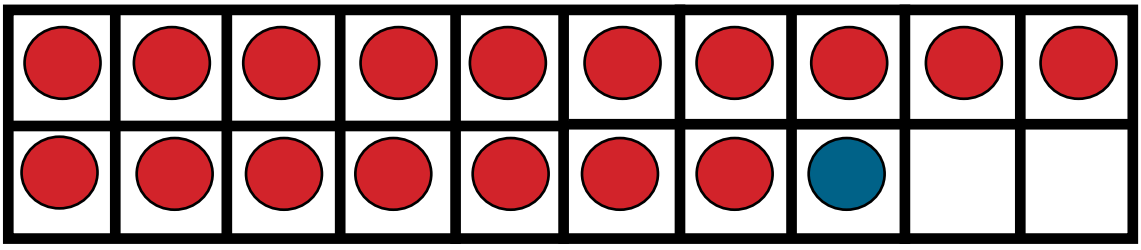
Twenty Frame Flashcards



12 + 5

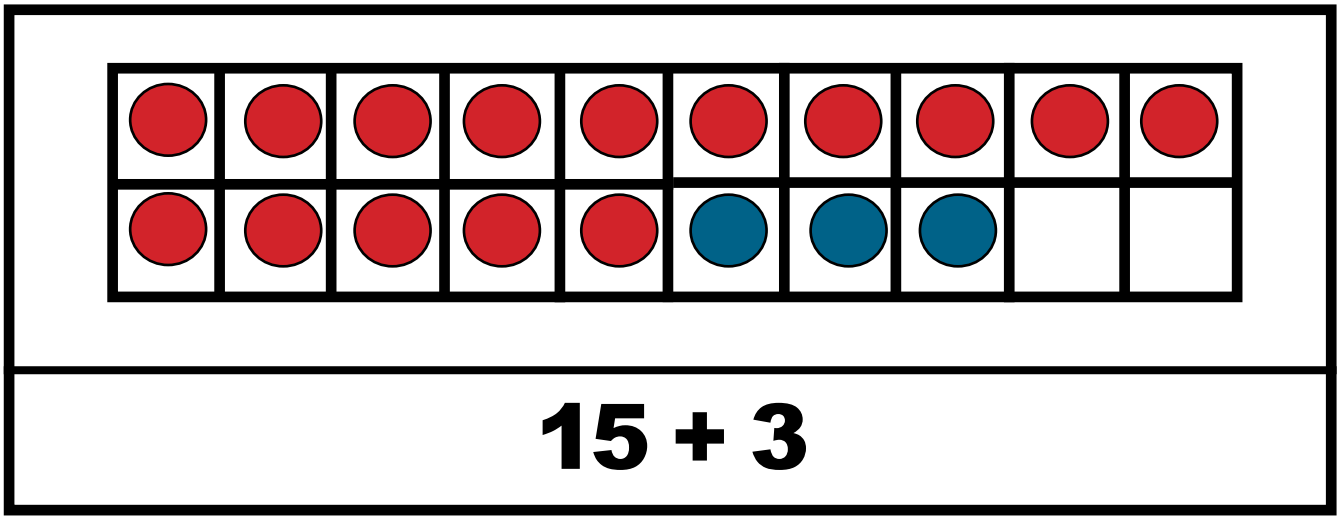


16 + 1



17 + 1

Twenty Frame Flashcards



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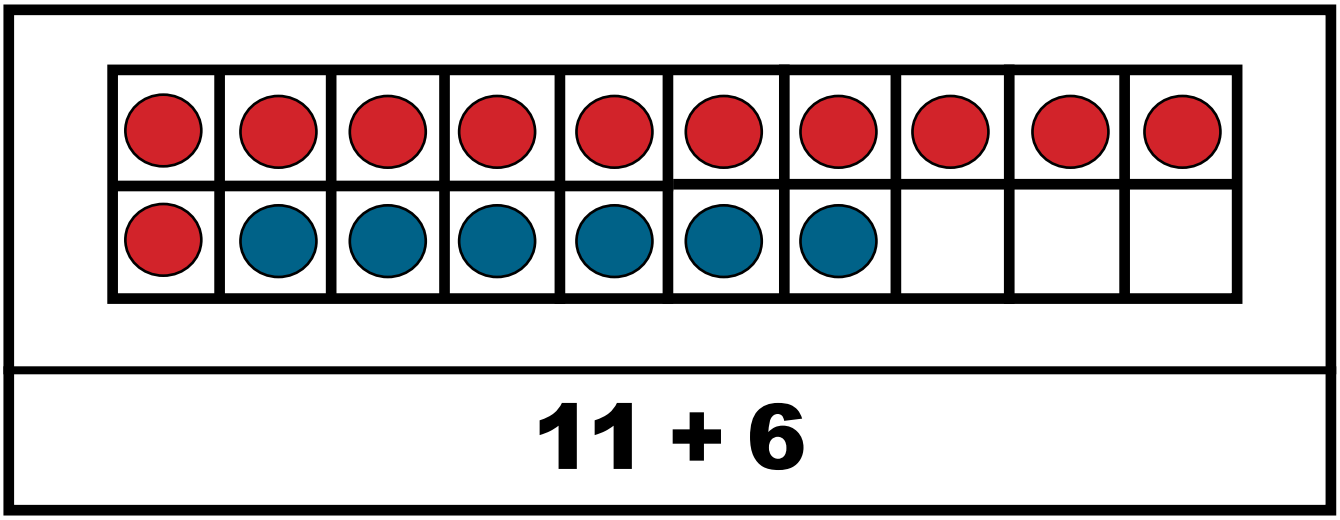

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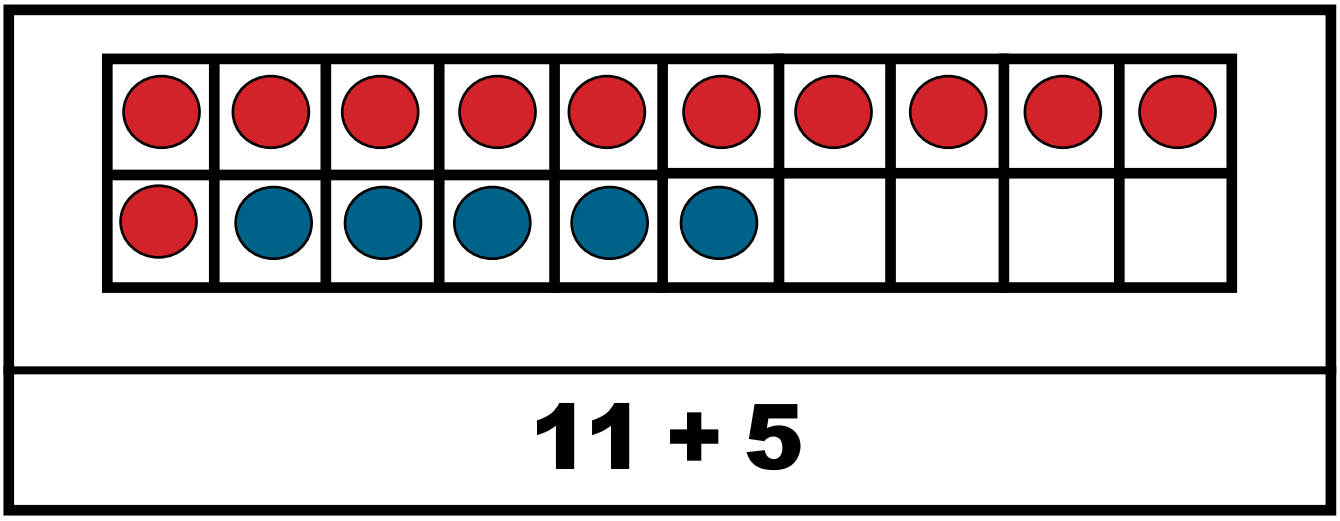


11 + 5

ADDING WITHIN 20 FLASHCARDS

12+6	11+4	16+1
10+3	13+3	17+1
15+1	12+2	15+3
17+2	14+4	11+6
10+1	12+5	11+5

Number Bracelets

Goal
Students focus on adding within 20

Way to Play
Students need to make number bracelets out of pony beads and pipe cleaners. Model the problem on the number bracelet.

Materials
Number Bracelet
Number Bracelet Templates
Flashcards

Scaffolding the Game
There are 2 sets of flashcards.
Set A:Number Bracelet flashcard that student makes.
Set B: Regular flashcards.

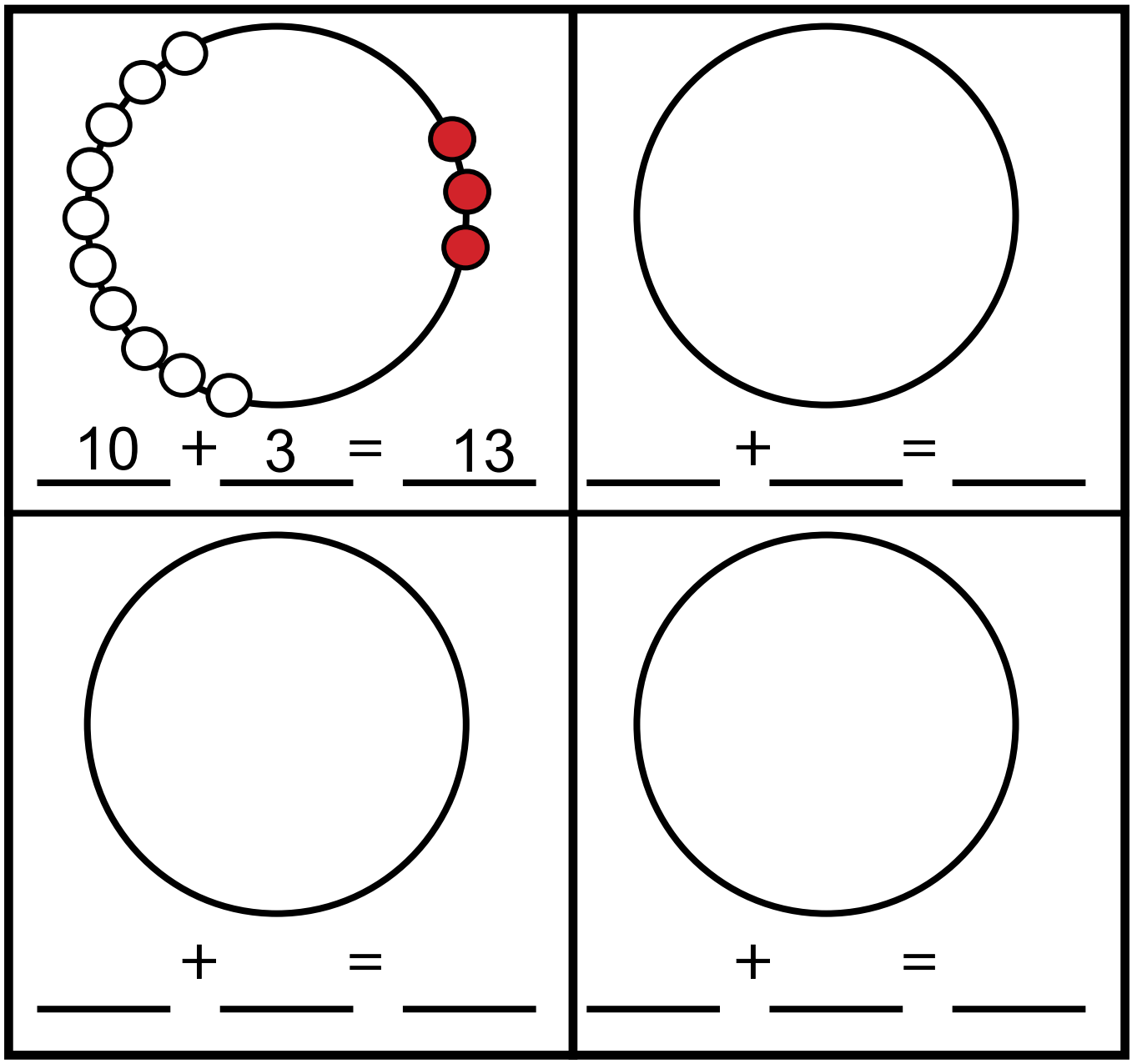
Directions

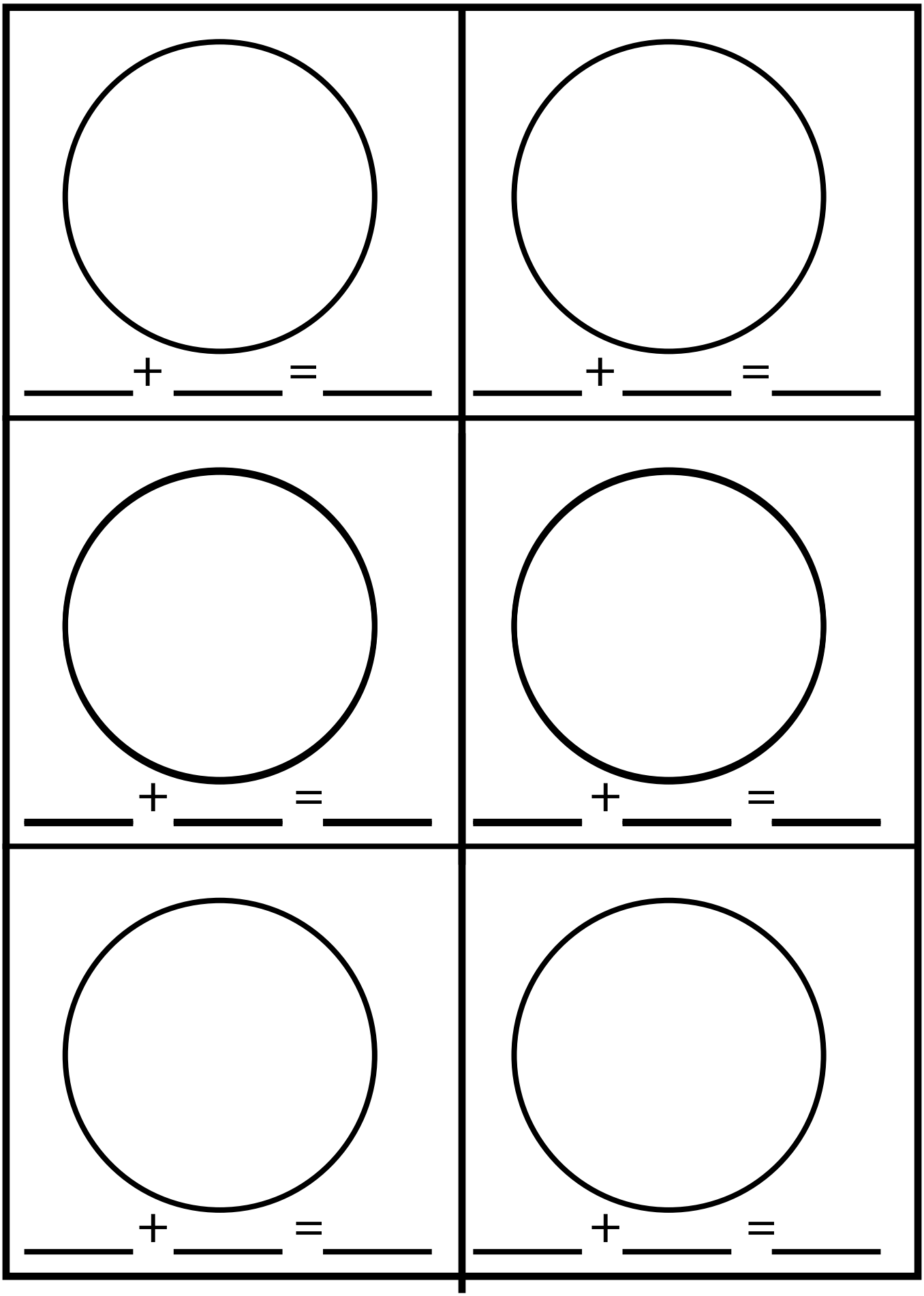
Activity 1
Pull a flashcard.
Take out the number bracelet and build the fact.
Show work on the recording sheet.

Activity 2
Students make up their own problems using facts within 20, then act
them out on the number bracelet.
Record work on the recording sheet and explain using math words below.

Use your math words:
My problem was _____. I added _____ and then _____ more.
My sum is _____.

Number Bracelets to Show Adding Within 20 Facts





Rekenrek

Goal
Students focus on adding within 20

Way to Play
Model the problem on the rekenrek.

Materials
Rekenrek
Rekenrek Paper
Flashcards

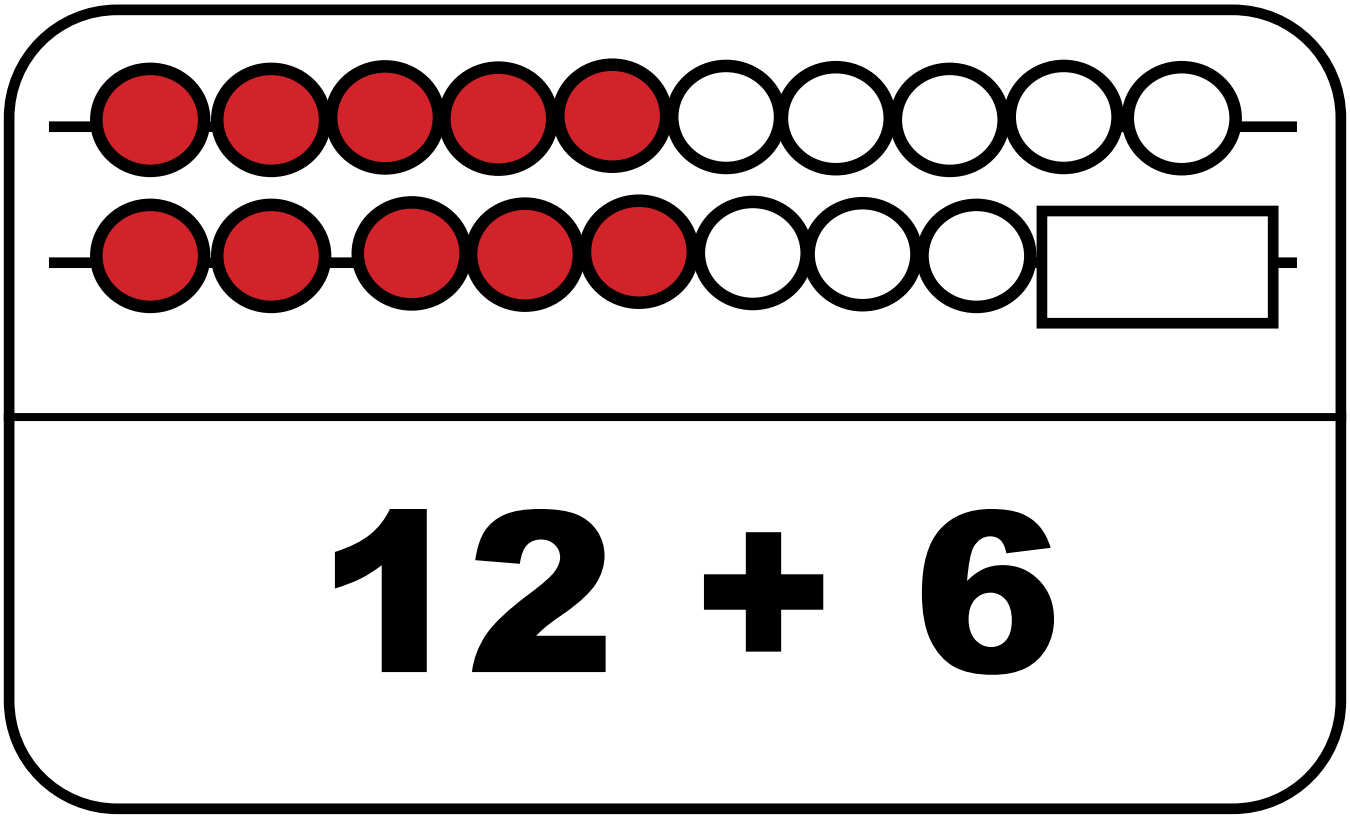
Scaffolding the Game
There are 2 sets of flashcards.
Set A: Rekenrek flashcards.
Set B: Regular Adding Within 20 flashcards

Directions

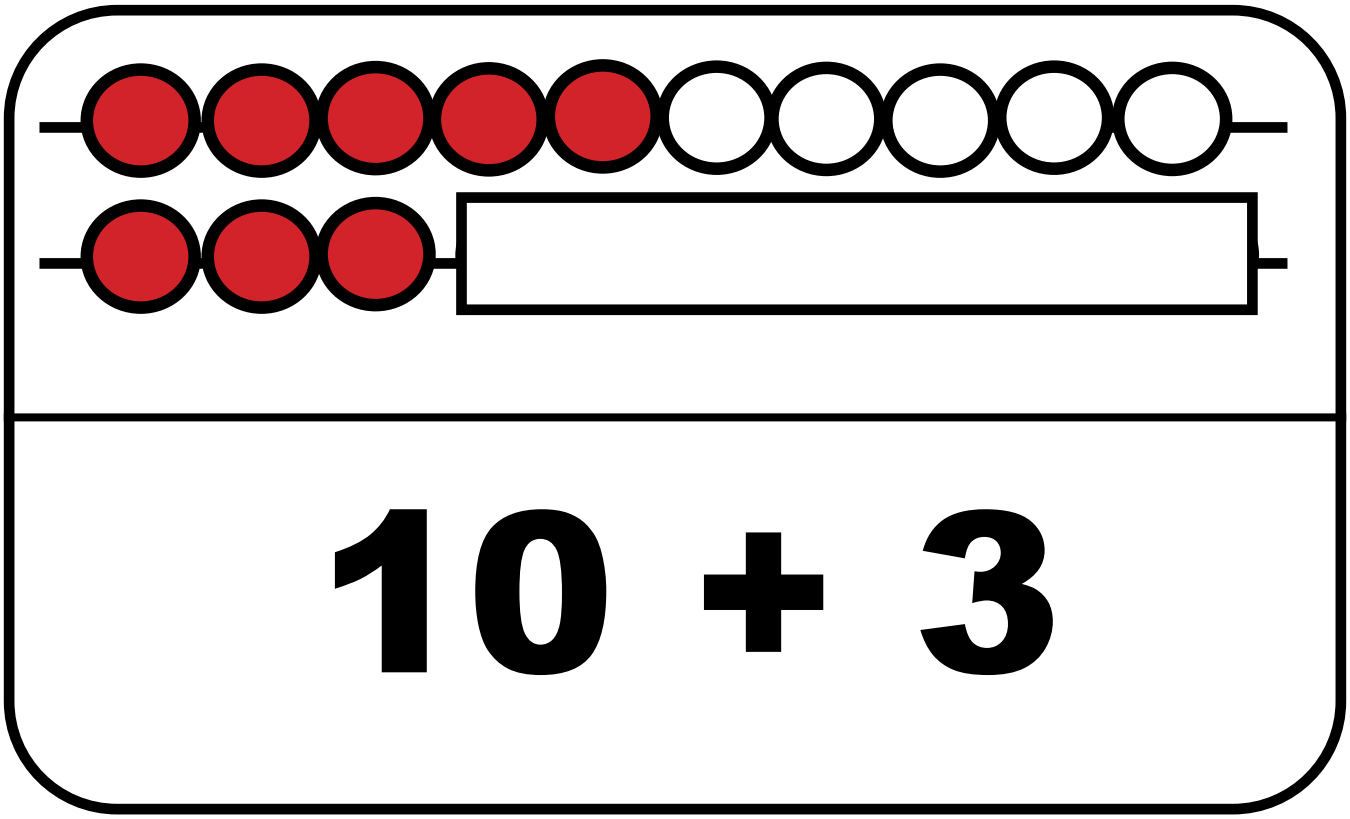
Activity 1
Pull a flashcard.
Take out the rekenrek and build the fact.
Say the problem out loud.
Solve.

Activity 2
Draw the fact on the rekenrek recording sheet. Explain using your math words below.

Use your math words:
My problem was _____. I added _____ and then _____ more.
My sum is _____.



12 + 6



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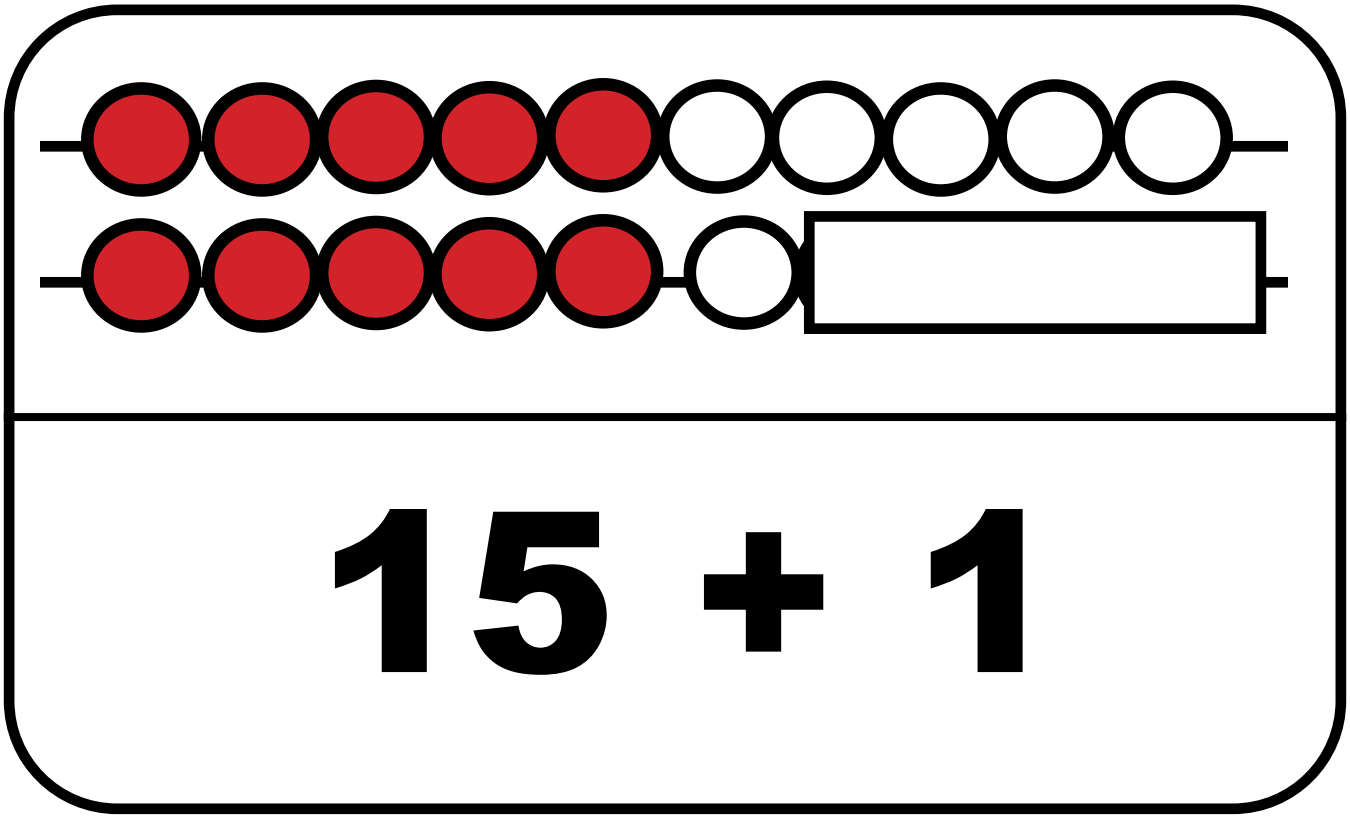

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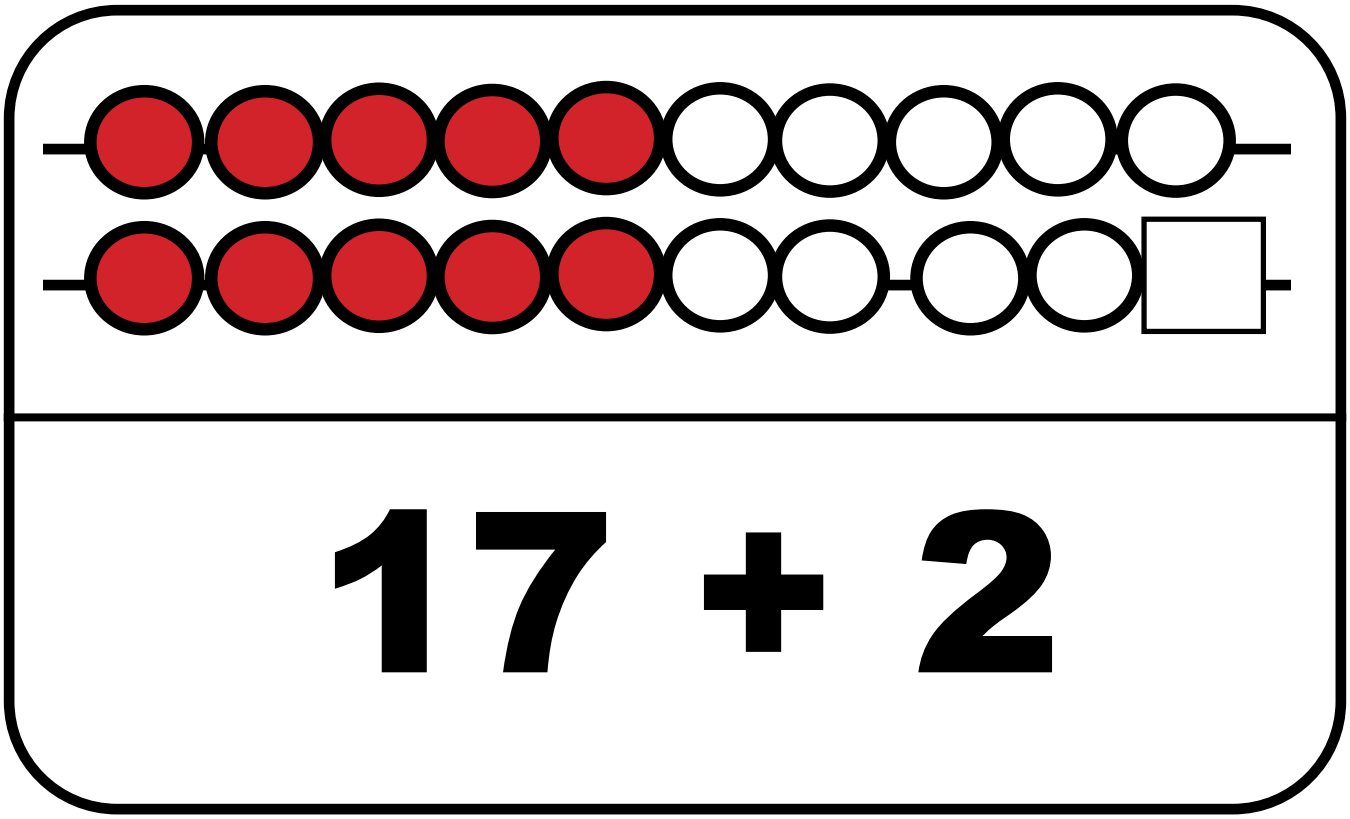

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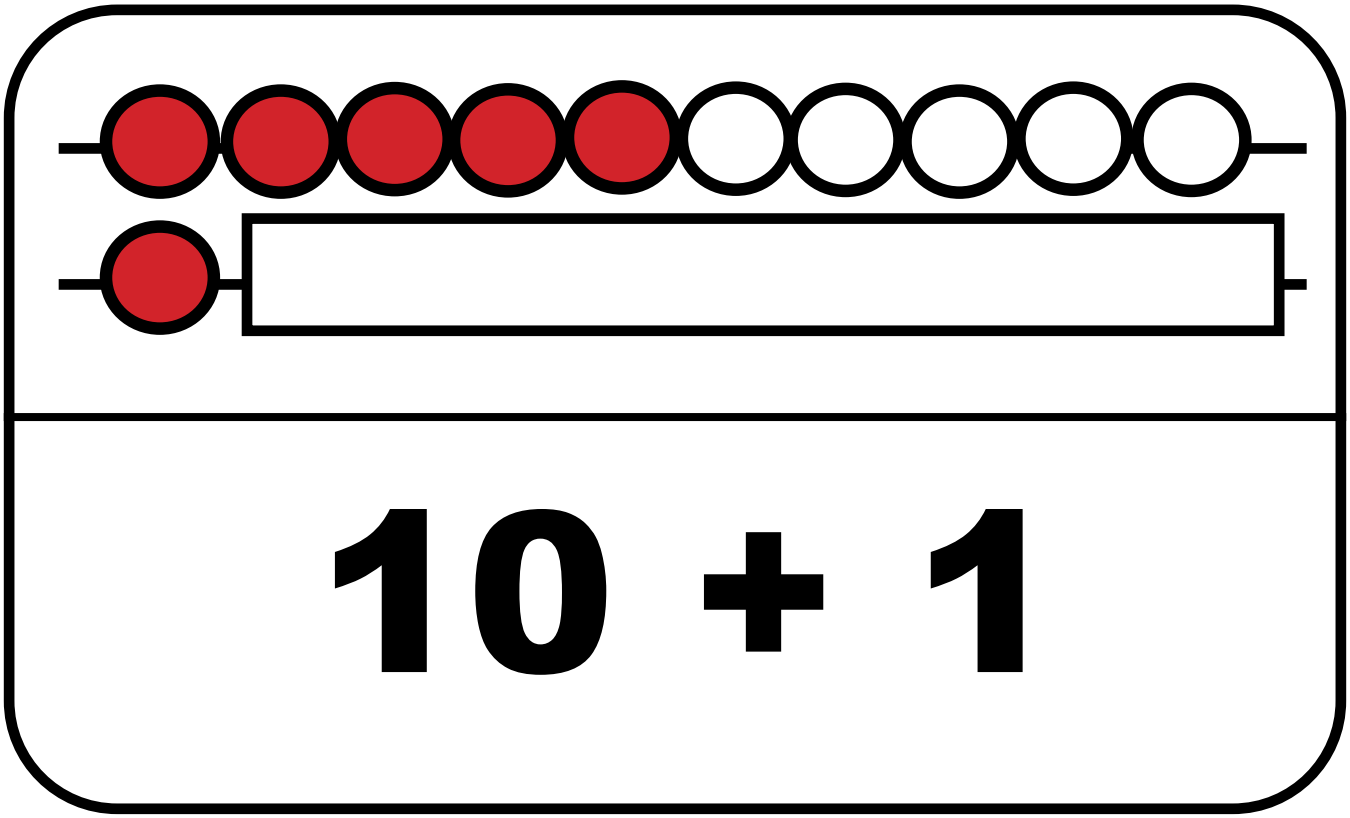

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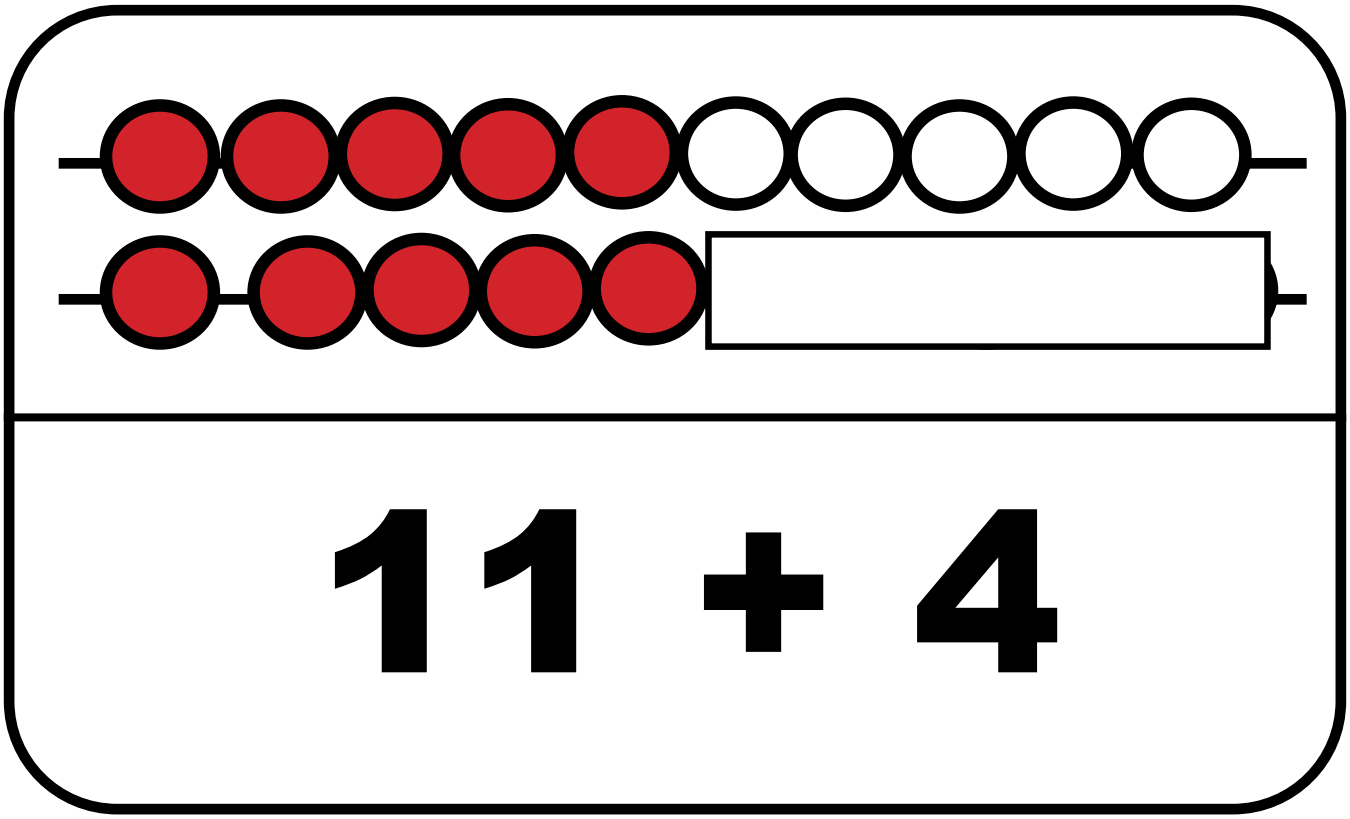
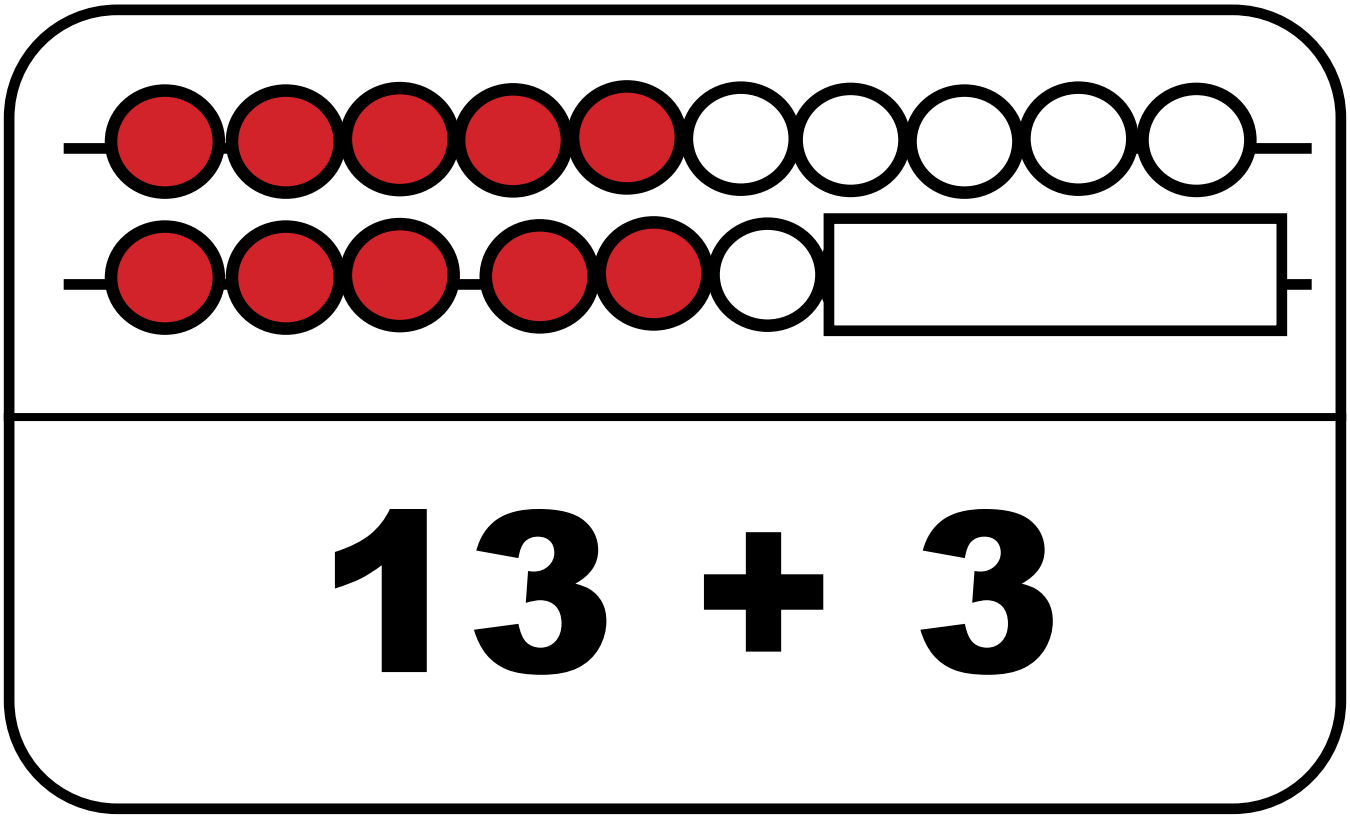
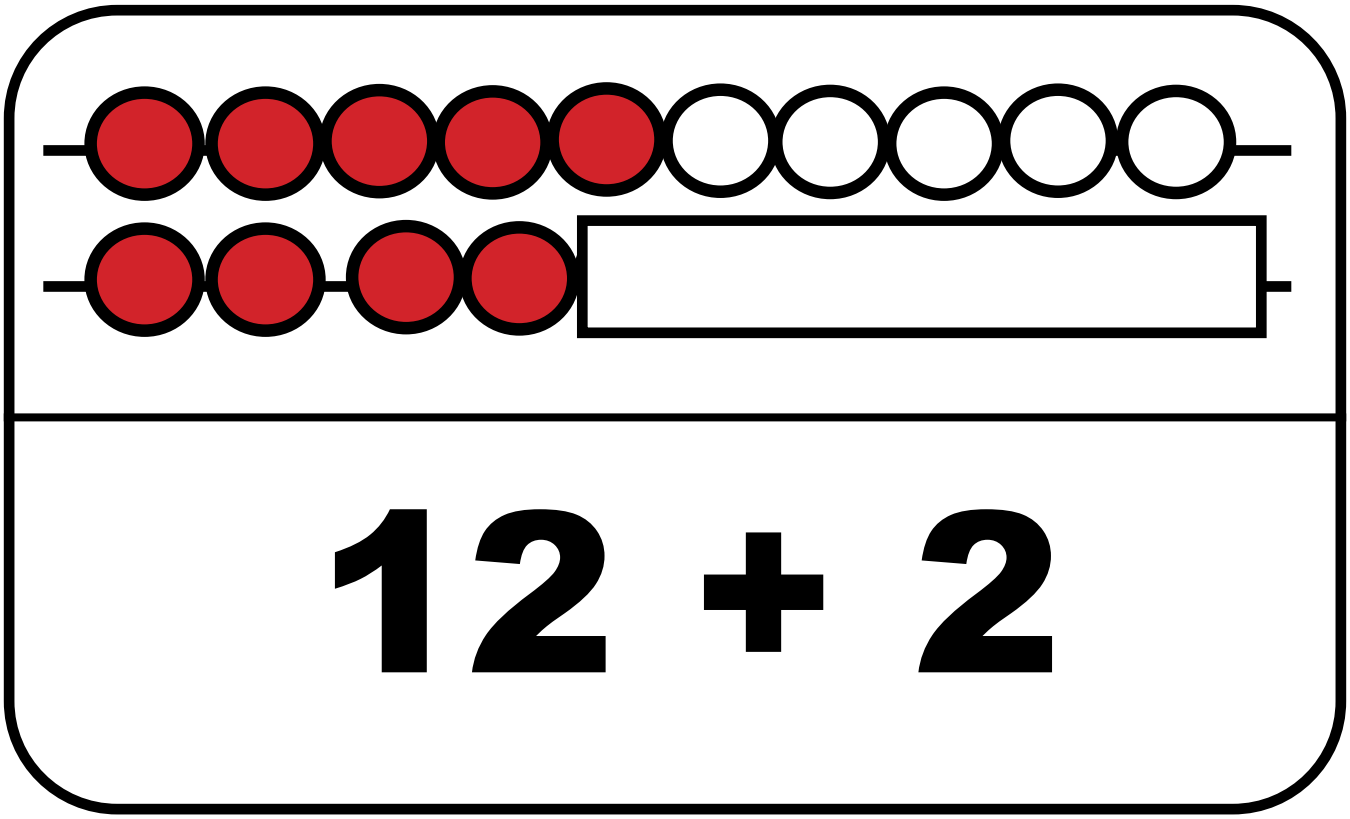


11 + 4



13 + 3



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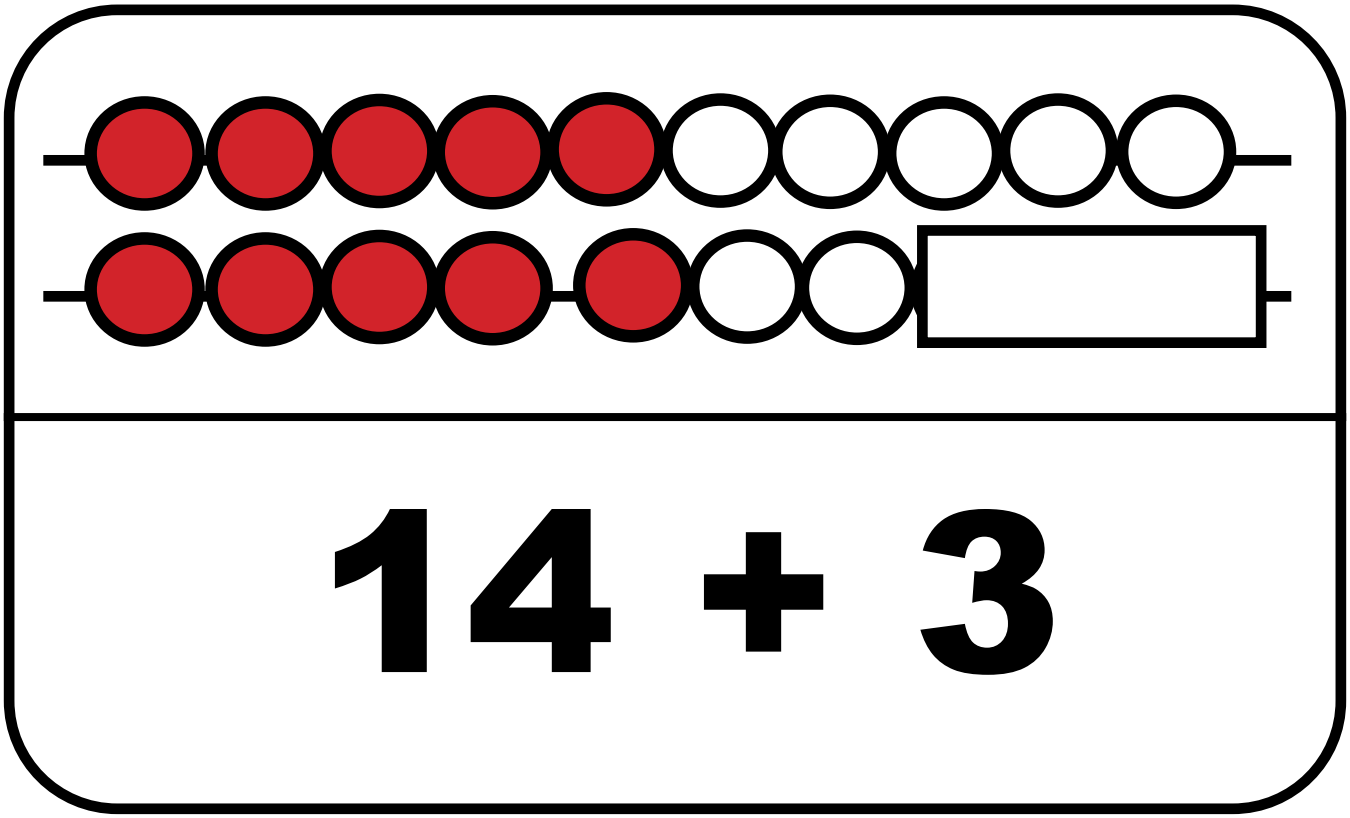
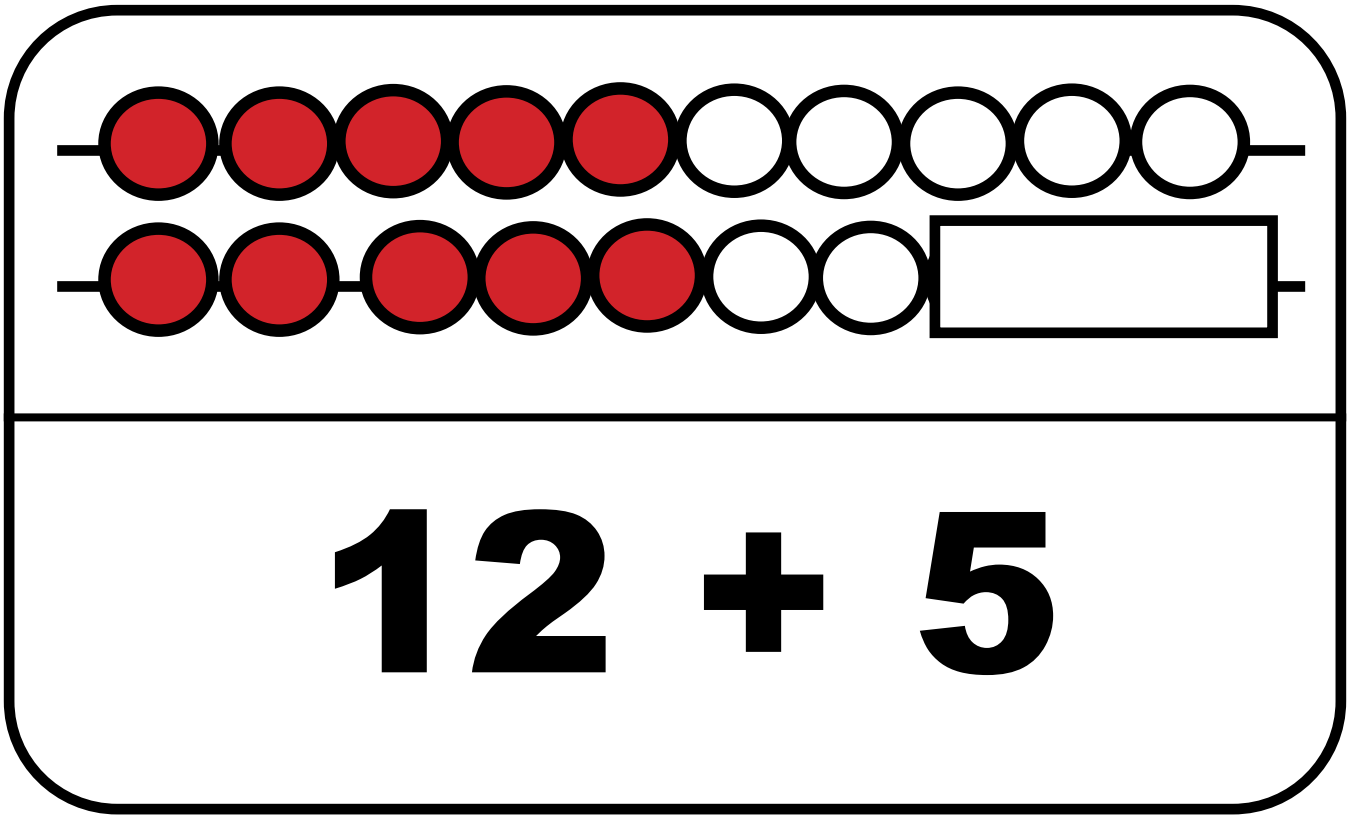
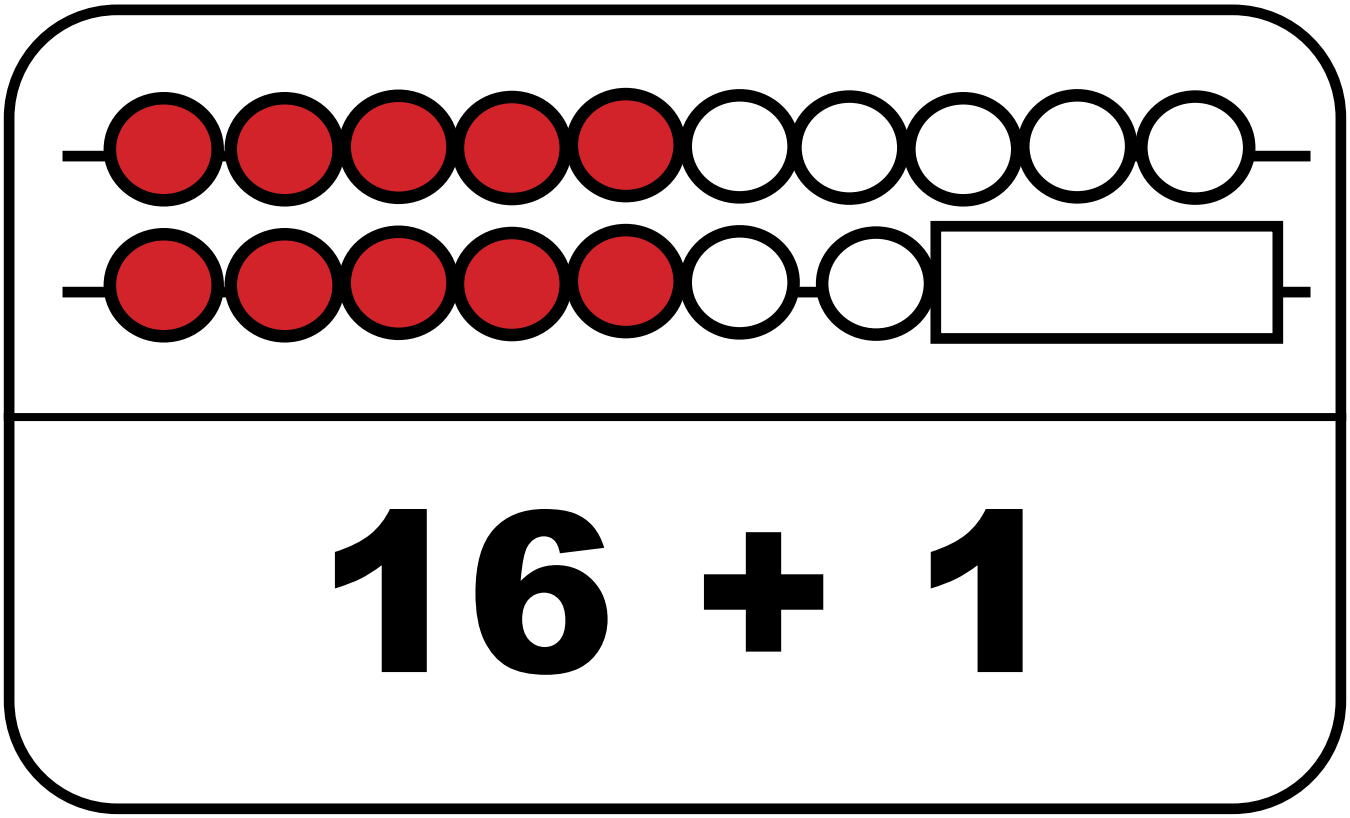


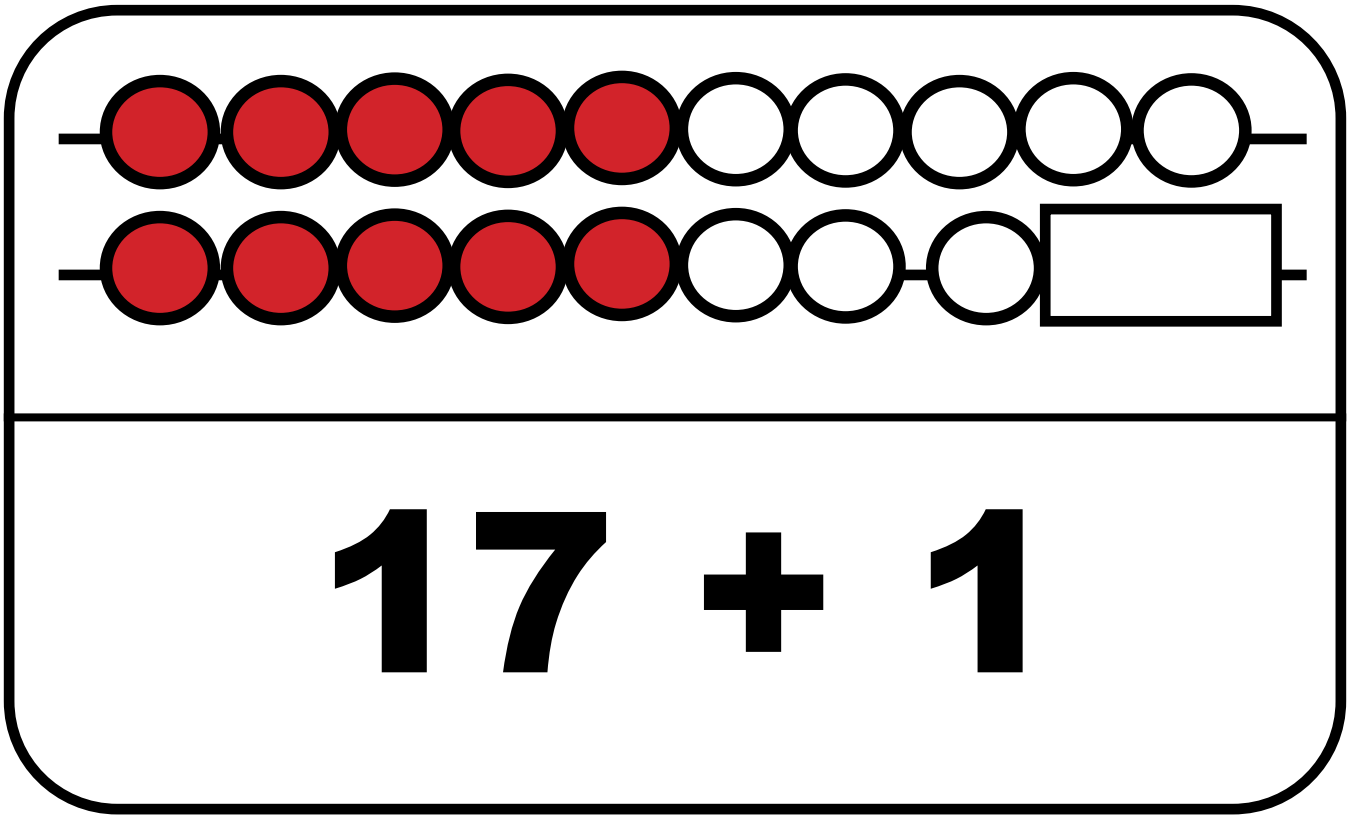
14 + 3



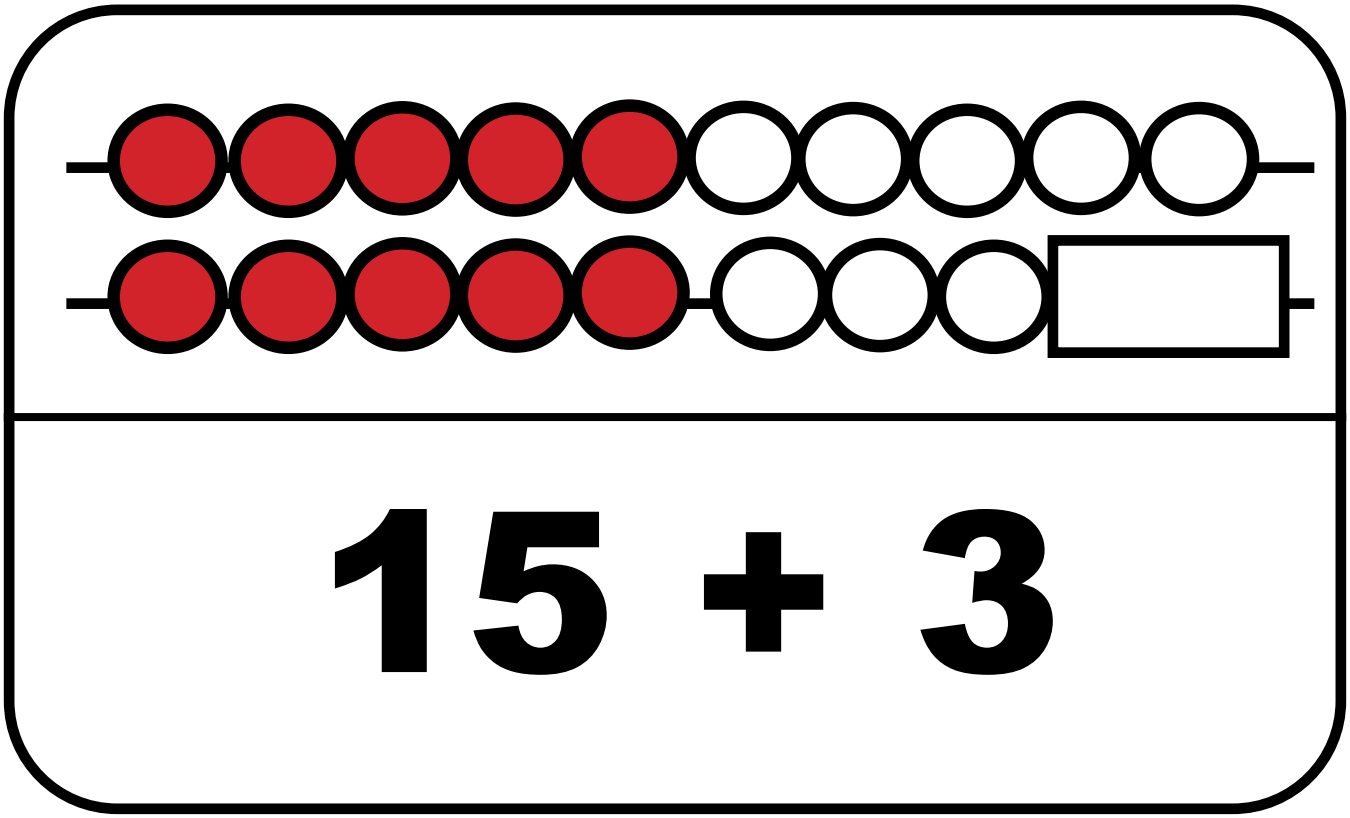
12 + 5



16 + 1



17 + 1



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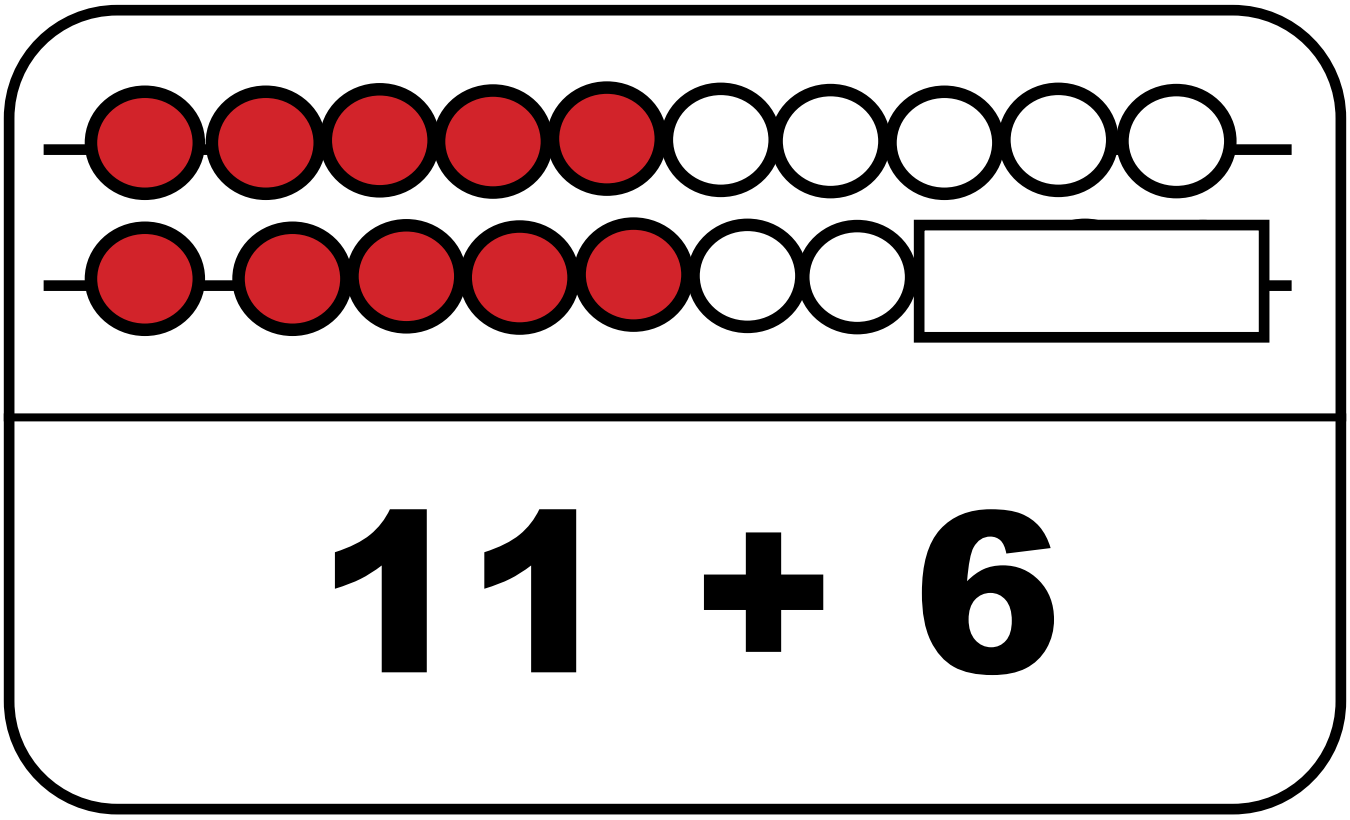
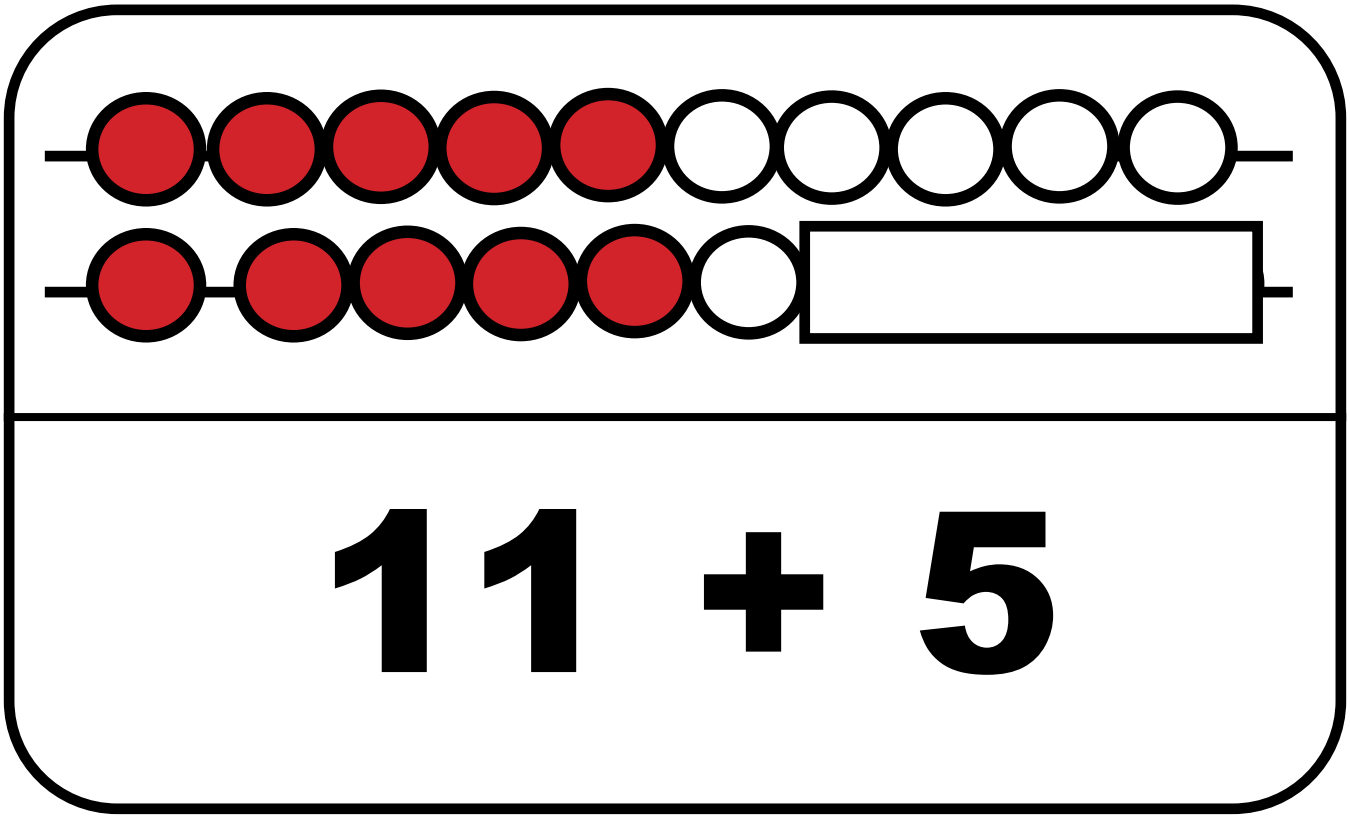


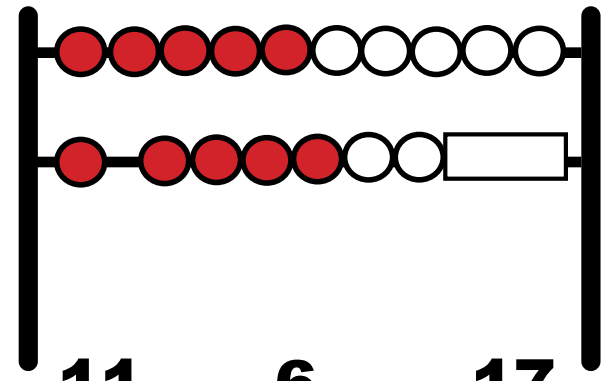
11 + 6



11 + 5

Recording Sheet

Draw What You Did on the Rekenrek!



11 + 6 = 17

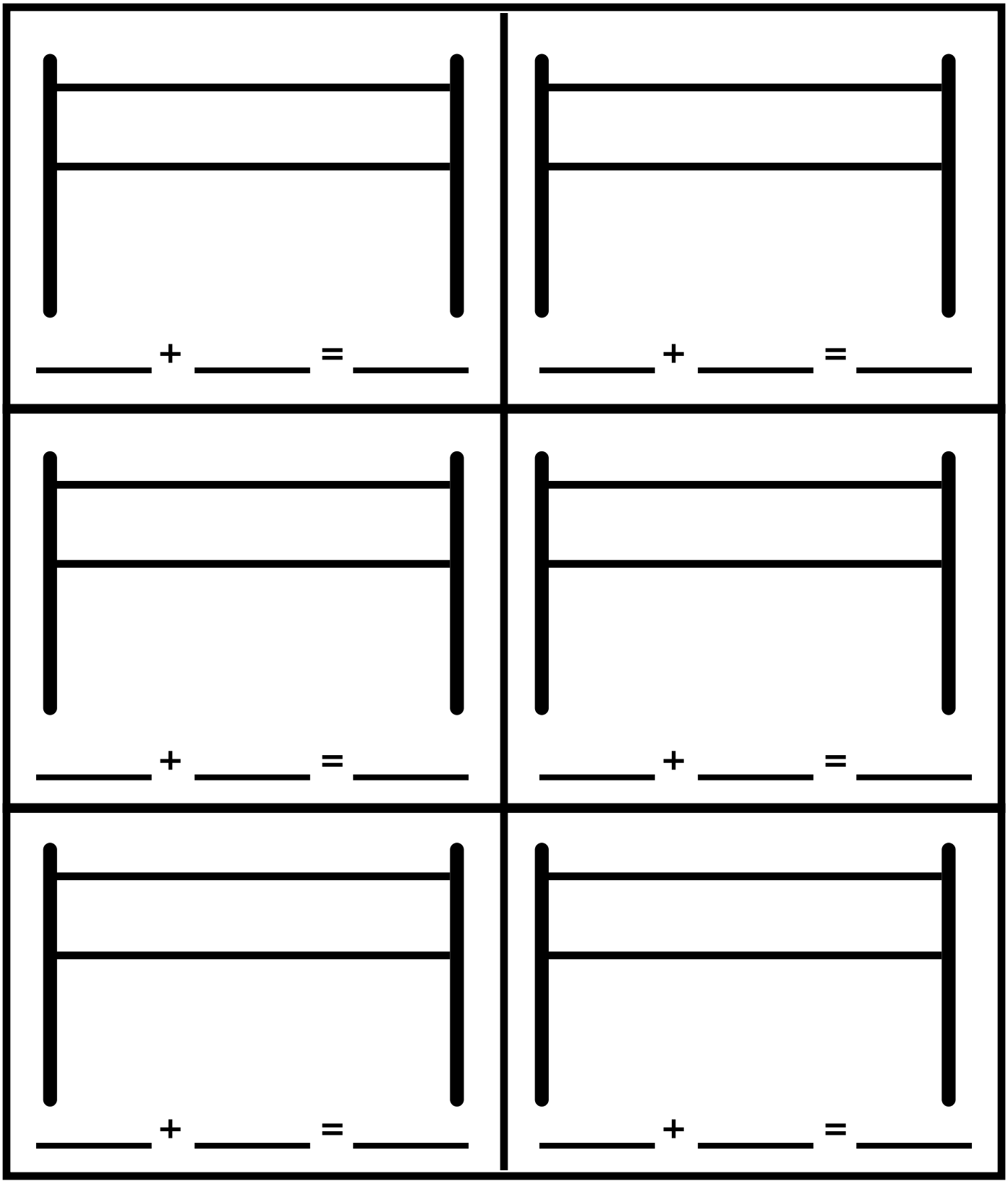
____ + ____ = ____

____ + ____ = ____

____ + ____ = ____

____ + ____ = ____

____ + ____ = ____



Cube Towers and Number Lines

Goal
Students focus on adding within 20

Way to Play
Model the problem with a cube tower. Record thinking on the cube tower template.

Materials
Cubes
Cube tower Template/ Recording Sheet
Concentration Cards

Scaffolding the Game
There are 2 sets of flashcards.
Set A: Scaffolded flashcards with cube pictures.
Set B: Match games with models and expressions.

Directions

Activity 1
Pull a flashcard.
Model it with cubes.
Color the cube template.
Solve.
Explain your work using math words below.

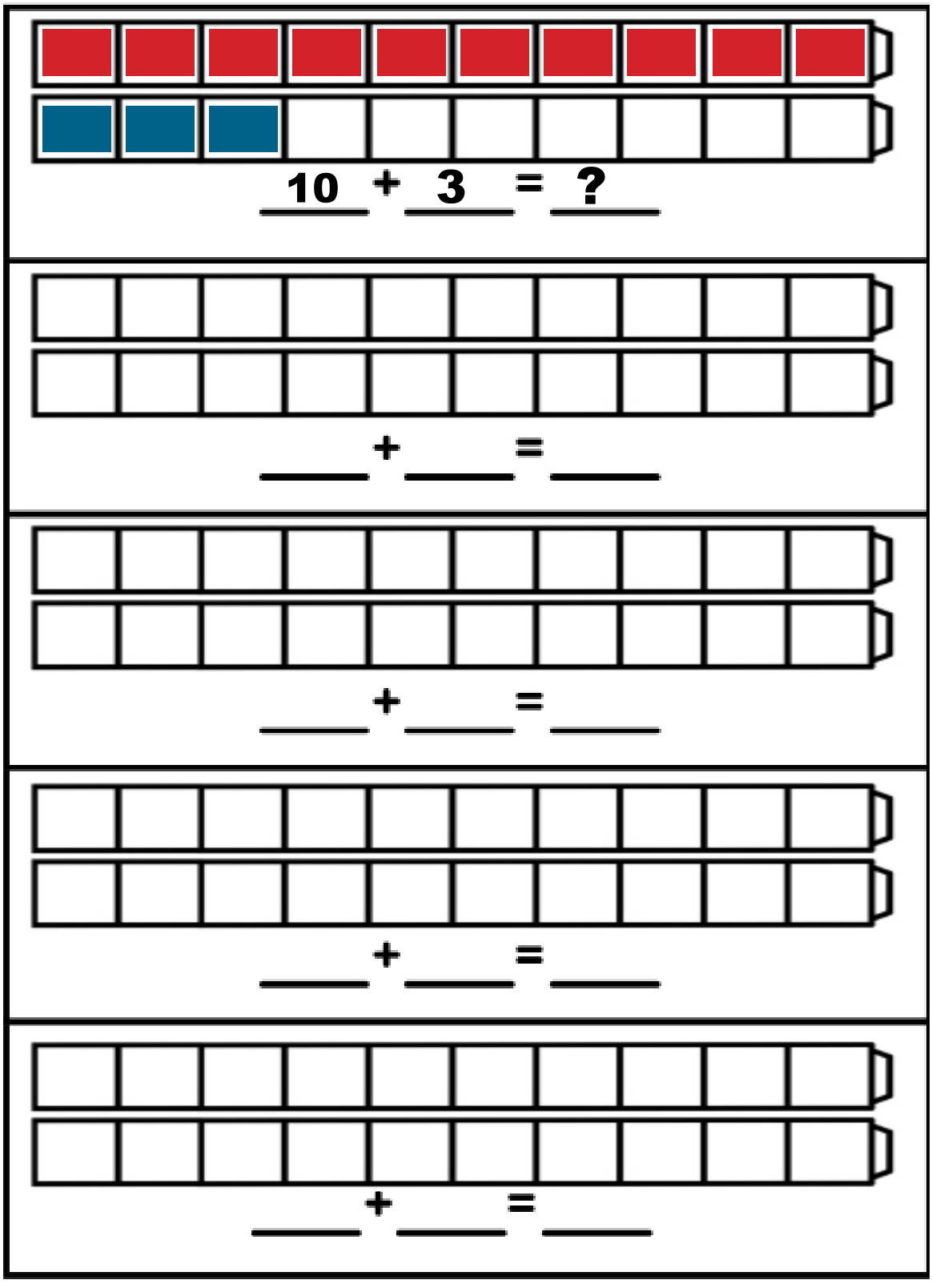
Activity 2
Lay out the cube cards and expressions from the Concentration Cards. (Fold so you do not see the expression on the cube card.)Take turns looking for the match of the expression and the model. Whoever finds the most matches wins.Check your answers by unfolding the cube cards.

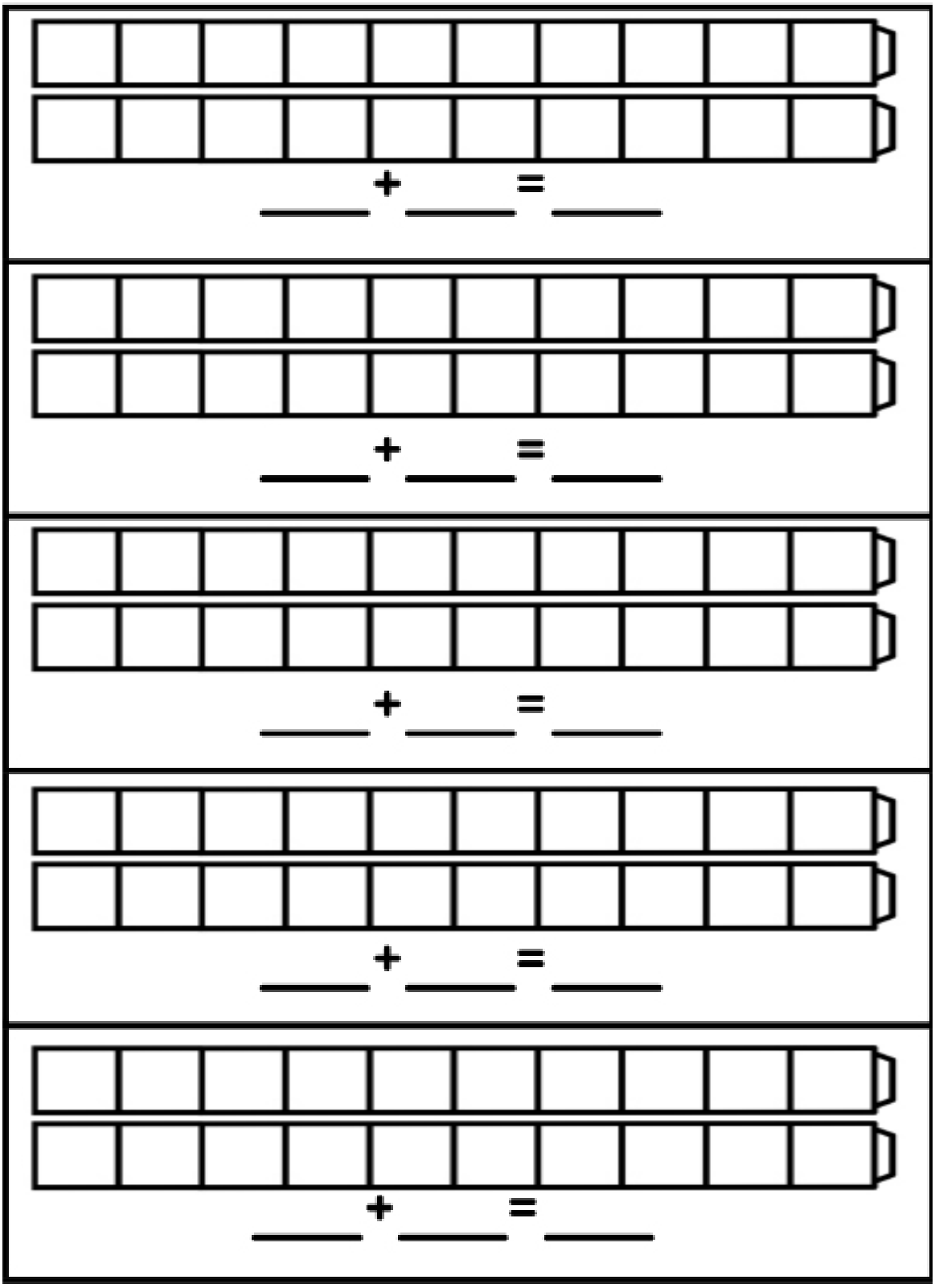
Use your math words:
My problem was _____. I started with _____ cubes.
Then, I added _____ to them. My sum is _____.

Cube Template

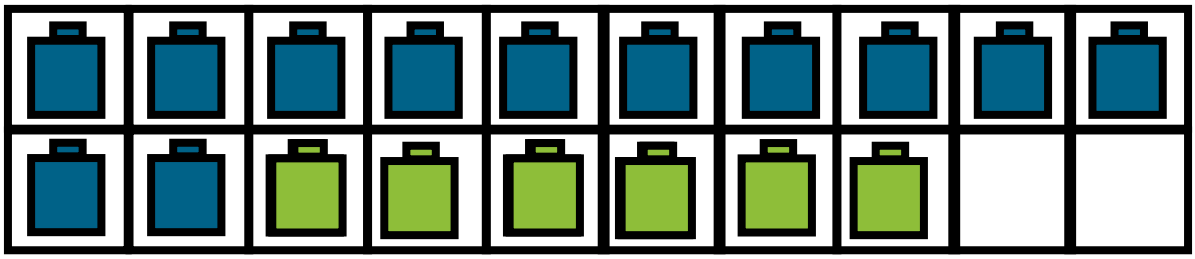
Build Adding within 20 Facts with The Cubes!

Roll the dice or pull a card, build a cube tower of the fact. Color the cube template and write the equation.

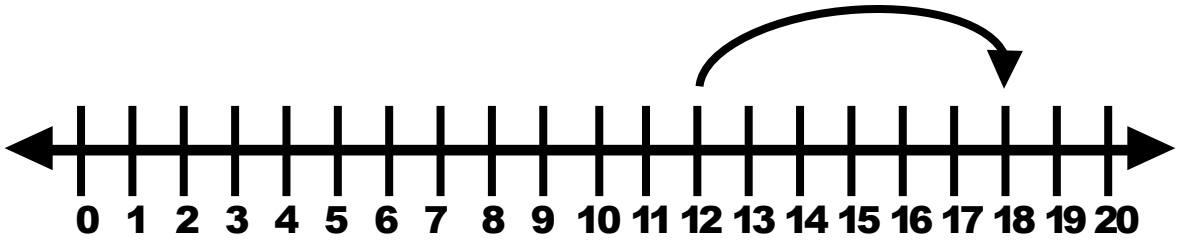




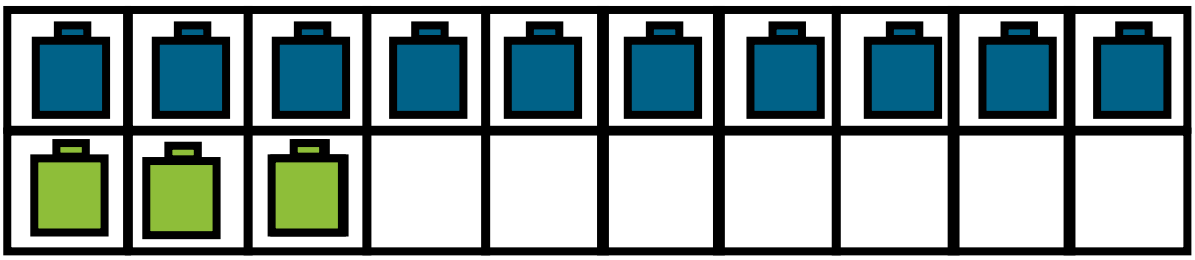
Concentration Cards



12 + 6



12 + 6



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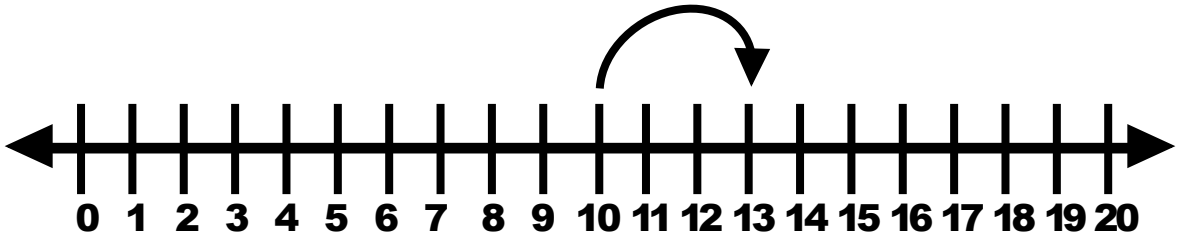

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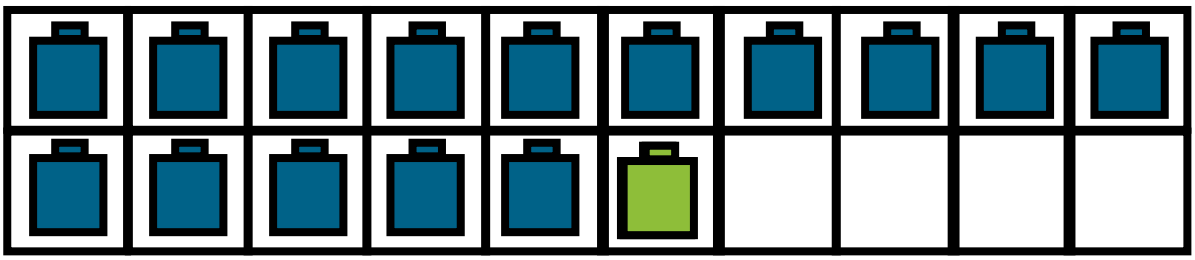

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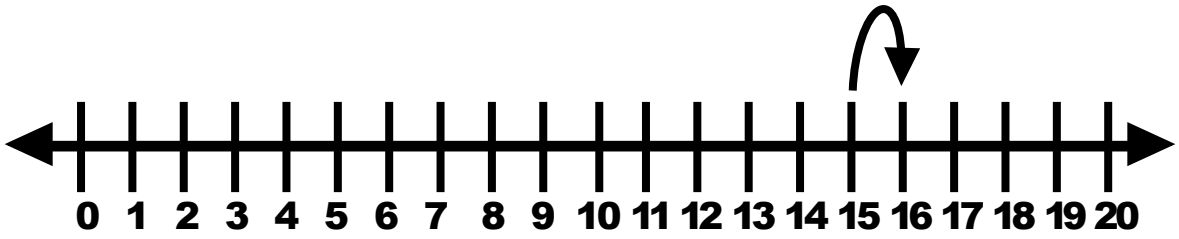

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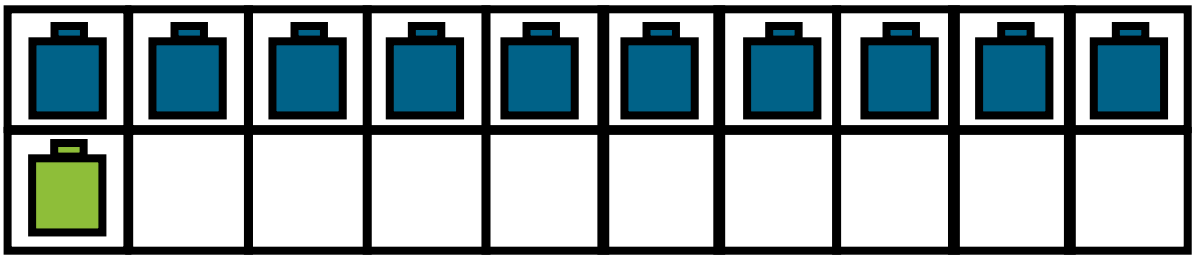

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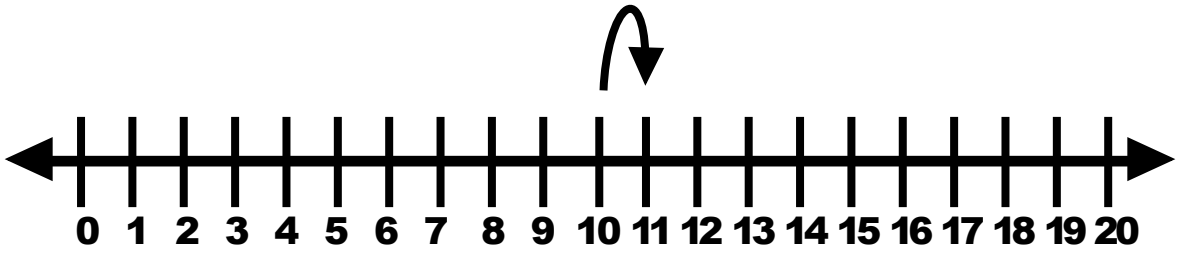

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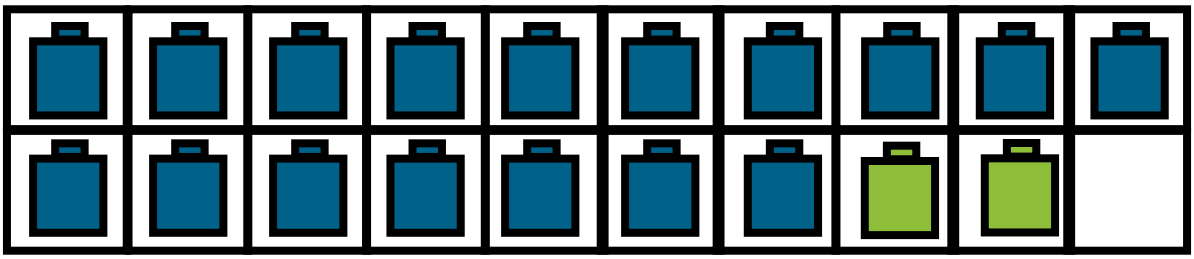

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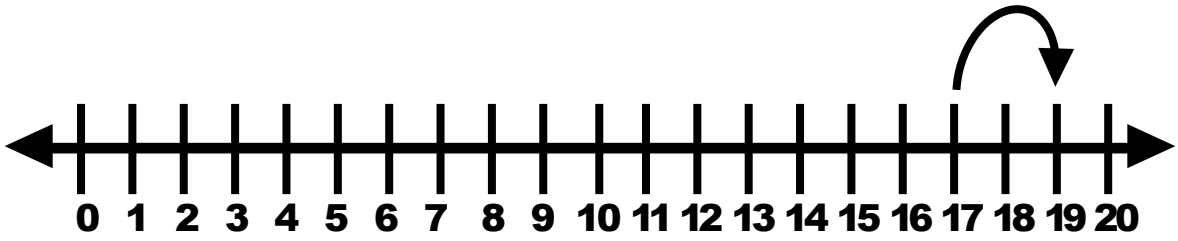

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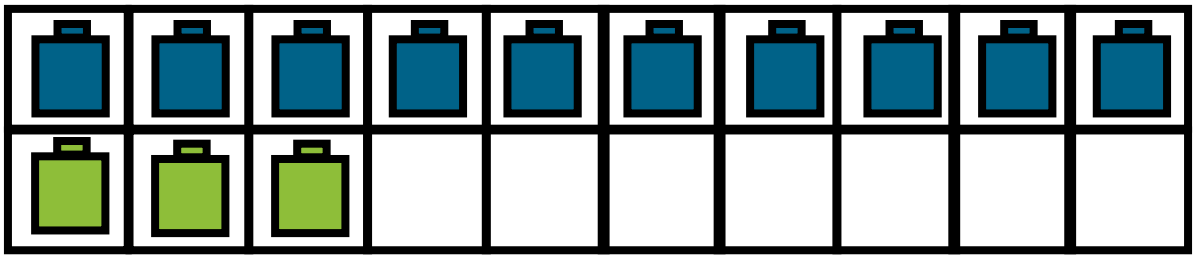

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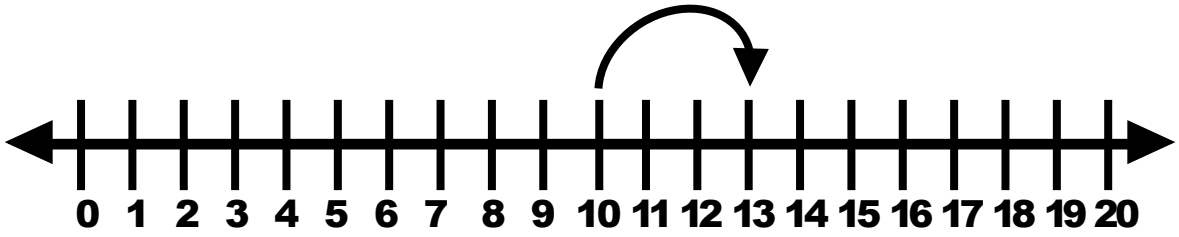
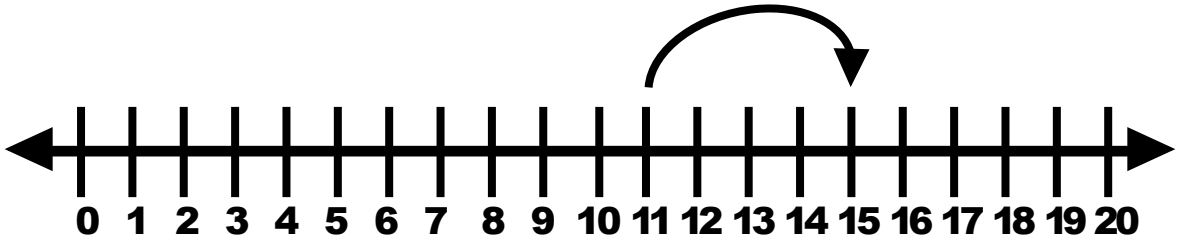


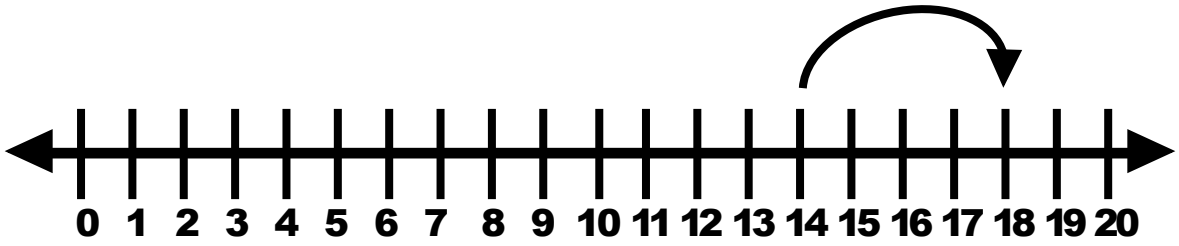
10 + 3

11 + 4



11 + 4

14 + 4



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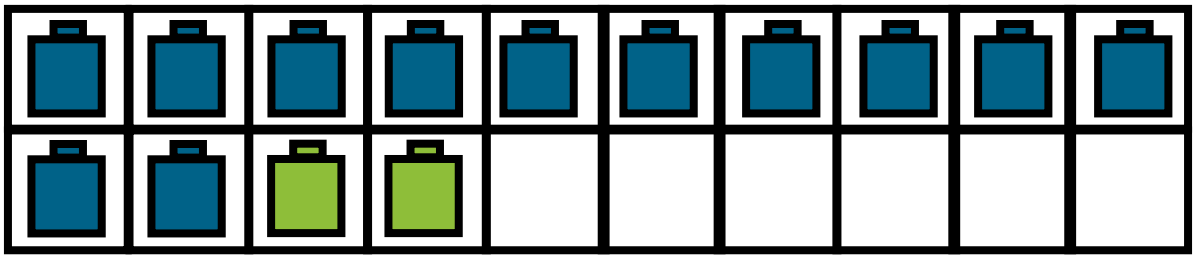

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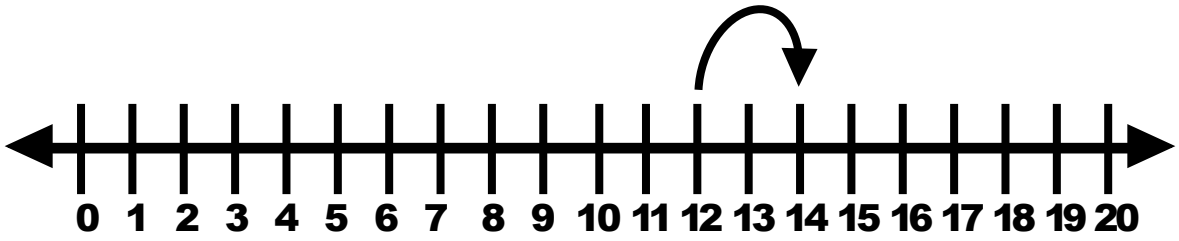

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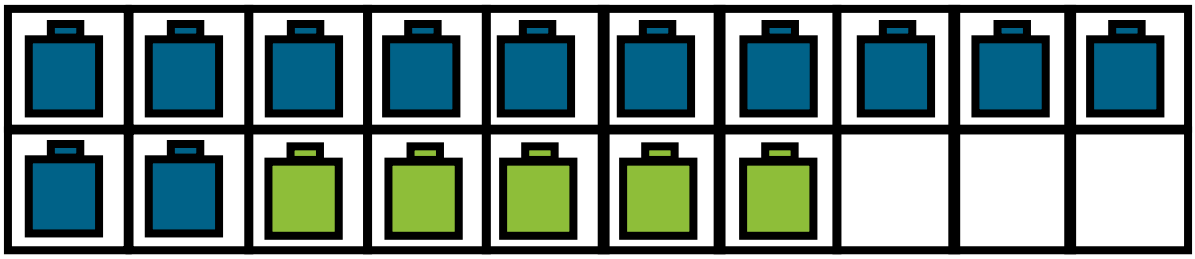

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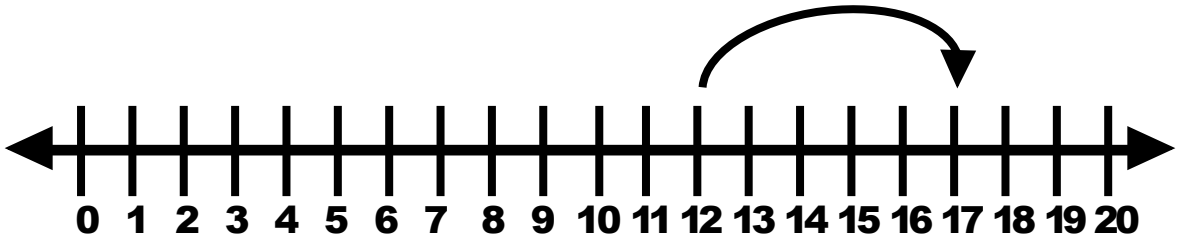

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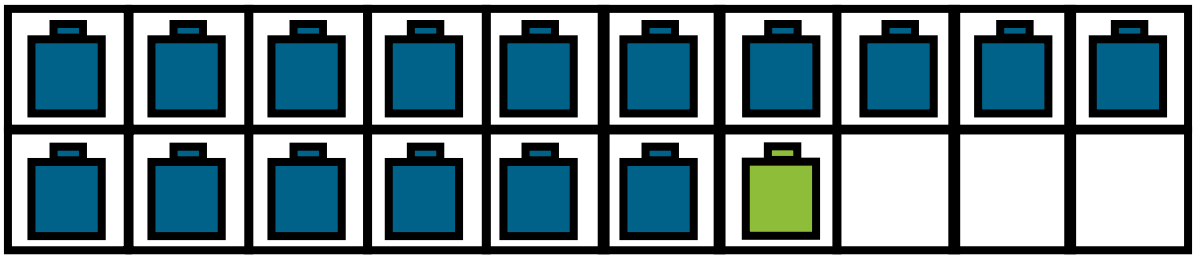

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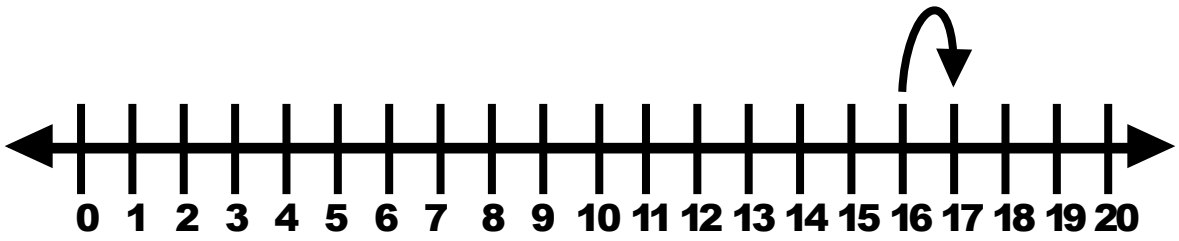
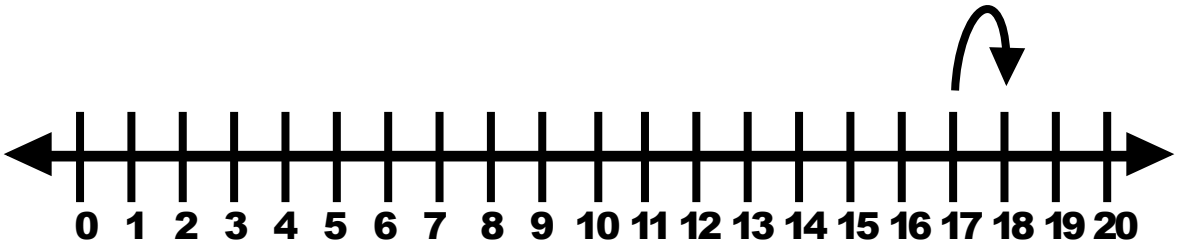


16 + 1

17 + 1



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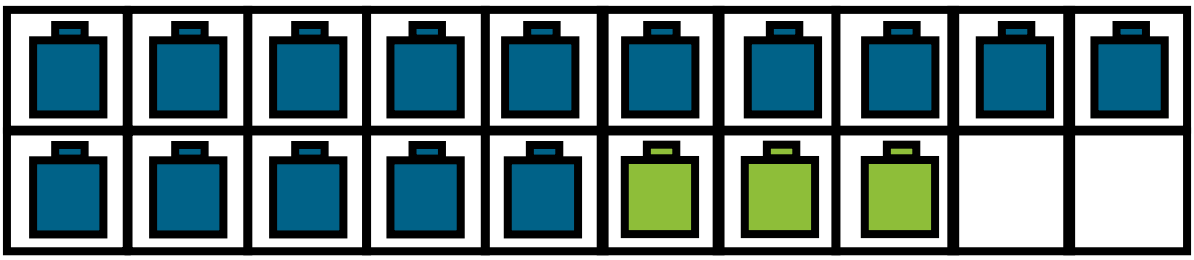

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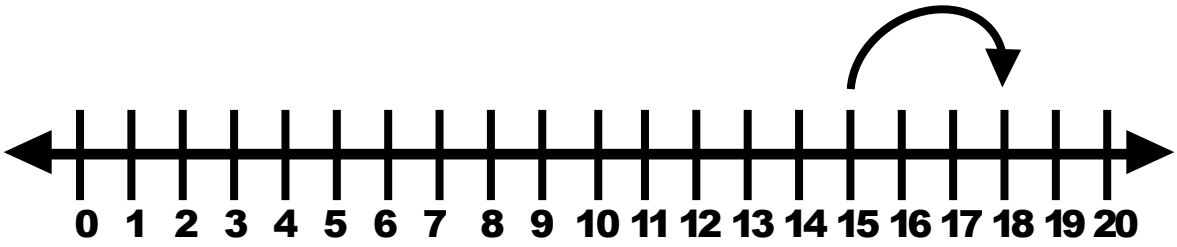

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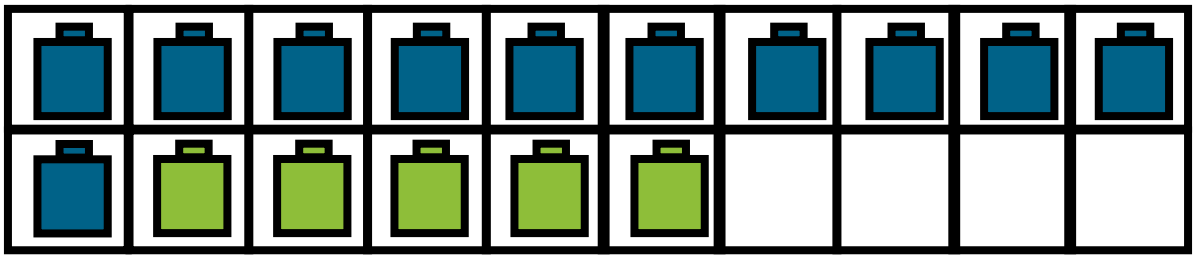

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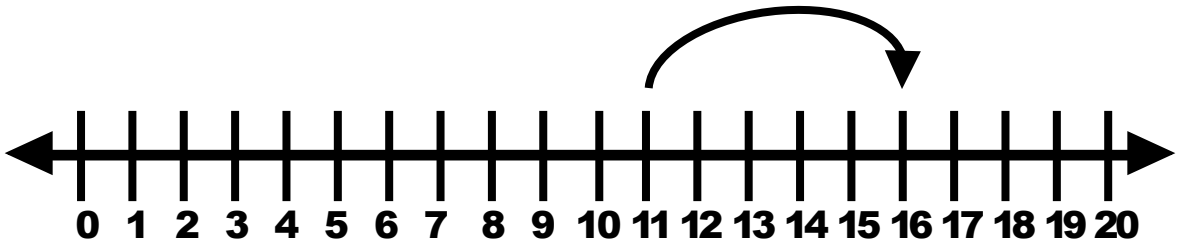

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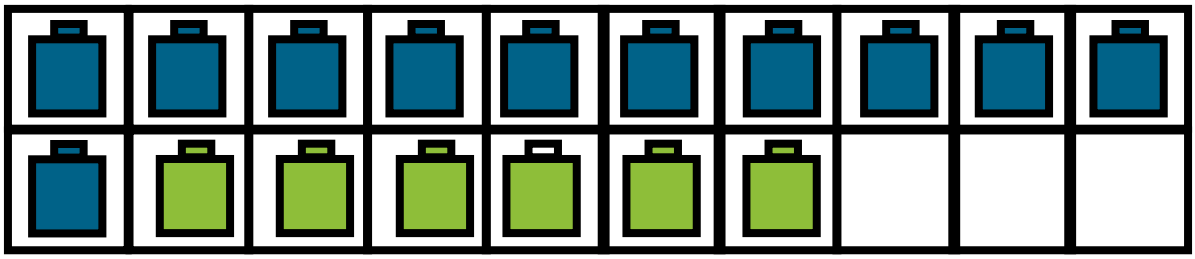
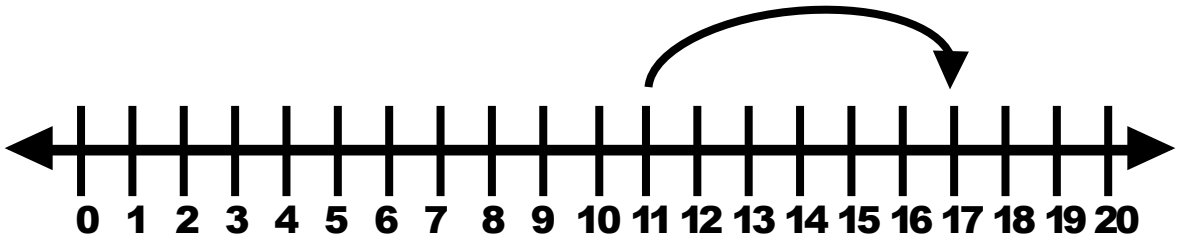


11 + 6



11 + 6

Bead Stick

Goal
Students focus on adding within 20

Way to Play
Students need to make bead sticks out of pony beads and pipe cleaners.
Model the problem with a bead stick.
Record thinking on the bead stick template.

Materials
Bead Stick
Bead Stick Activity Sheet.

Scaffolding the Game
There are 2 sets of flashcards.
Set A: Flashcards that model adding within 20 facts.
Set B: Flashcards with sums.

Directions

Activity 1
Pull a flashcard.
Model it with the bead stick.
Color the bead stick activity sheet.
Solve.

Activity 2
Pull a flashcard (p. 64).
Model the addends on the bead stick.
Color the bead stick activity/equation sheet.
Write the equation to match the problem
Solve.

Use your math words:
My problem was _____. I started with _____ bead stick.
Then, I added _____ to them. My sum is _____.

Bead Stick Activity

12 + 2 = 14

____ + ____ = ____

____ + ____ = ____

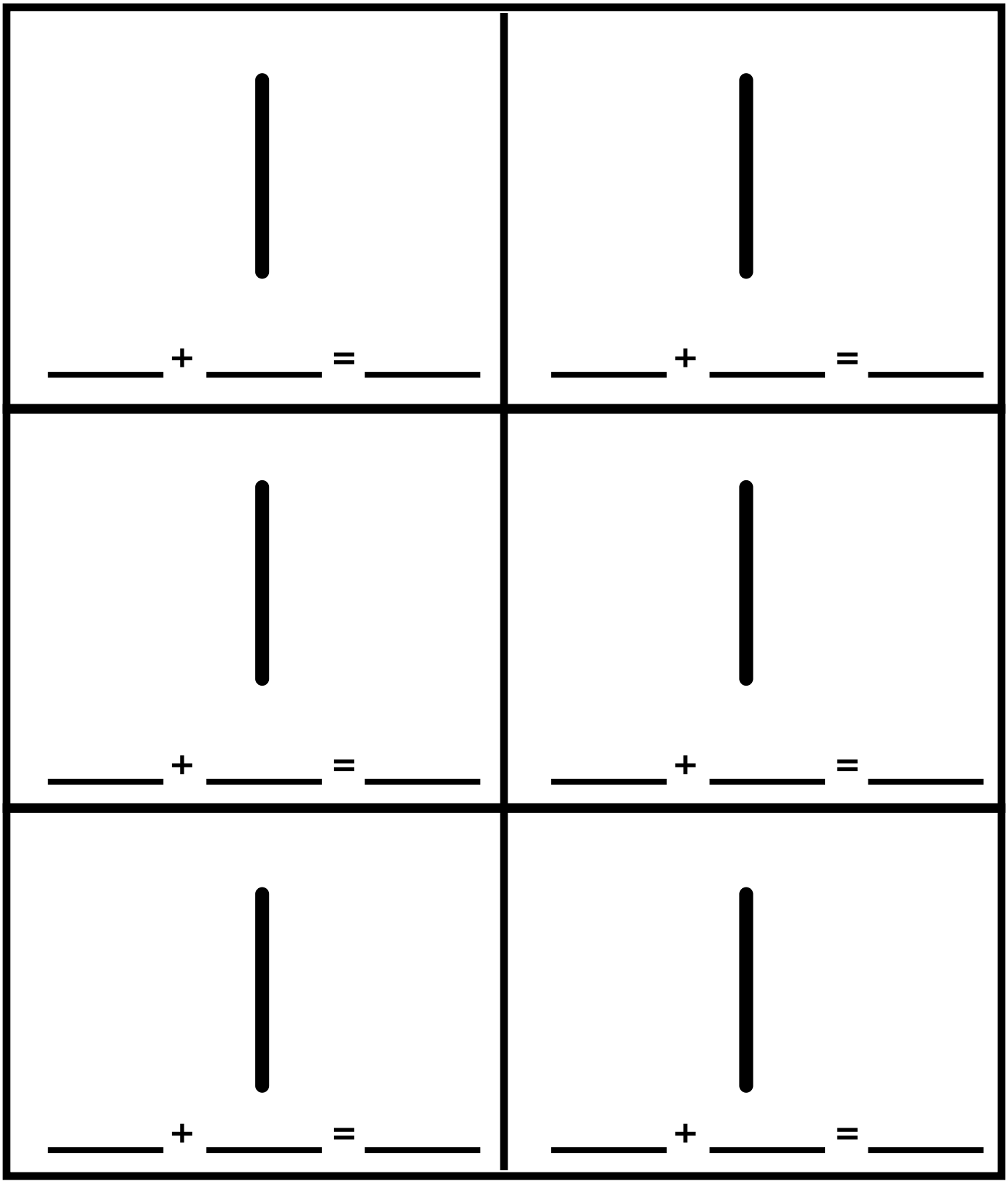
____ + ____ = ____

____ + ____ = ____

____ + ____ = ____

____ + ____ = ____

Bead stick activity/equation sheet



Part Part Whole Mat

Goal
Students focus on adding within 20

Way to Play
Model the problem with a Part-Part Whole Mat. Record thinking on the template.

Materials
Large Part-Part Whole Mat
Part-Part Whole Template
Recording Sheet
Concentration Cards

Scaffolding the Game
There are 2 sets of flashcards.
Set A: Whole flashcards (p. 64)
Set B: Regular flashcards (p. 25)

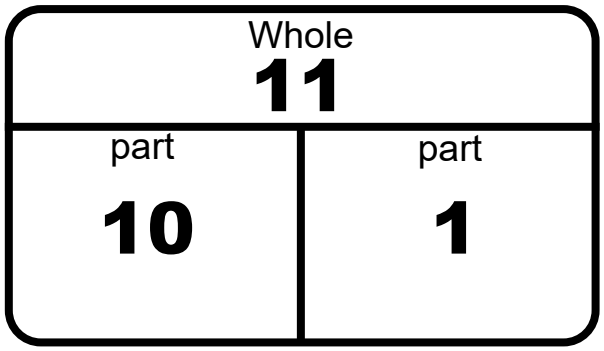
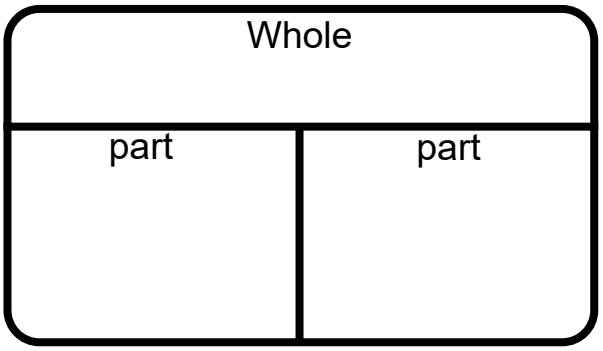
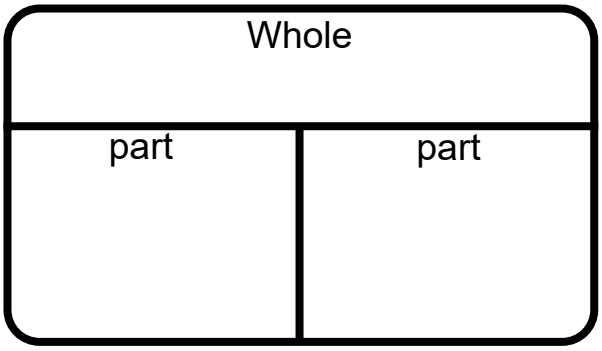
Directions

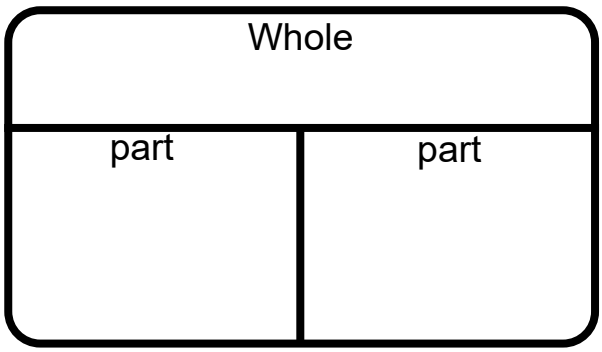
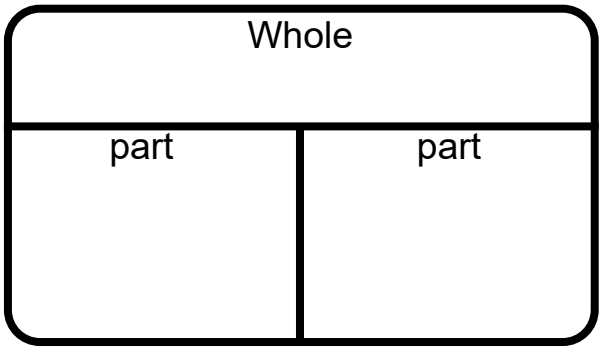
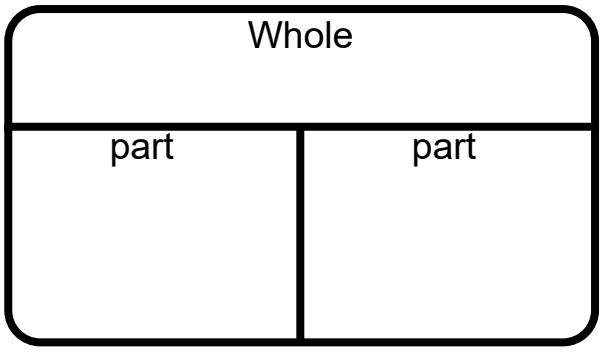
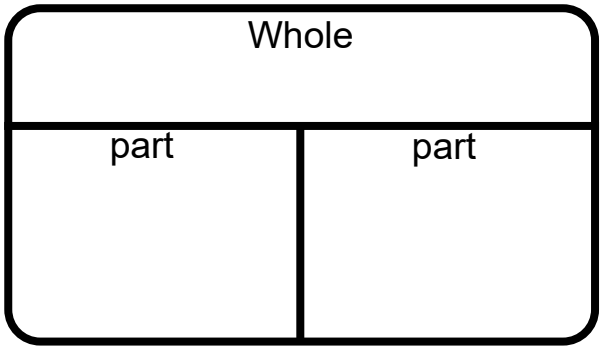
Activity 1
Pull a flashcard.
Model it on the big part-part whole mat recording sheet.
Solve.

Activity 2
Use the flashcards from p. 25 and 64. Match them on the big part part whole mat. Write the numbers on the recording sheet.

Use your math words:
My problem was _____. I added ____ then _____.
My sum is _____.

Part Part Whole Mat Recording Sheet

10 + 1 = 11	
____ + ____ = ____	
____ + ____ = ____	

_____ + _____ = _____	 Whole part part
_____ + _____ = _____	 Whole part part
_____ + _____ = _____	 Whole part part
_____ + _____ = _____	 Whole part part

FLASHCARDS

18	15	17
13	16	18
16	14	18
19	18	17
11	17	16

Story Mats

Goal
Students focus on adding within 20.

Way to Play
Act out facts on the number mat. Students can pull a fact card and act out the problem. They can pull a story telling mat and act out the problem. They can just make up their own problems.

Materials
Story Mats
Story Telling pieces
Flashcards
Story problems

Scaffolding the Game
Use the regular flashcards or the word problem mat.
To add more rigor, change the problems to match the flashcards from Set B on p. 90.

Directions

Activity 1
Pull an expression from 'adding within 20 flashcards' (p. 74) and act out a story.

Show your work on Word problem Recording Sheet.

Activity 2
Use the "Word problem story card and Recording Sheet", choose an expression from p. 74 to fill in the blanks. Solve the problem. Show your work on the recording sheet. Repeat until all cards have been used.

Use your math words:
My problem was _____. I started with _____counters.
Then, I added _____ to them. My sum is _____.

Word Problem Story Card and Recording Sheet

DOGS

Lisa had ___ dogs. She got ___ more. How many does she have now?

SET-UP EQUATION:

___ + ___ = ?

Drawing

Twenty Frame

Answer Equation	Answer:
___ + ___ = ___	_____ Dogs

Word Problem Story Card and Recording Sheet

FISH

There were ___ fish. ___ more swam up. How many are there now?

SET-UP EQUATION:

___ + ___ = ?

Drawing

Twenty Frame

Answer Equation	**Answer:**
___ + ___ = ___	**_____ Fish**

Word Problem Story Card and Recording Sheet

BALLS

The kids had ___ balls. They got ___ more. How many do they have altogether now?

SET-UP EQUATION:

___ + ___ = ?

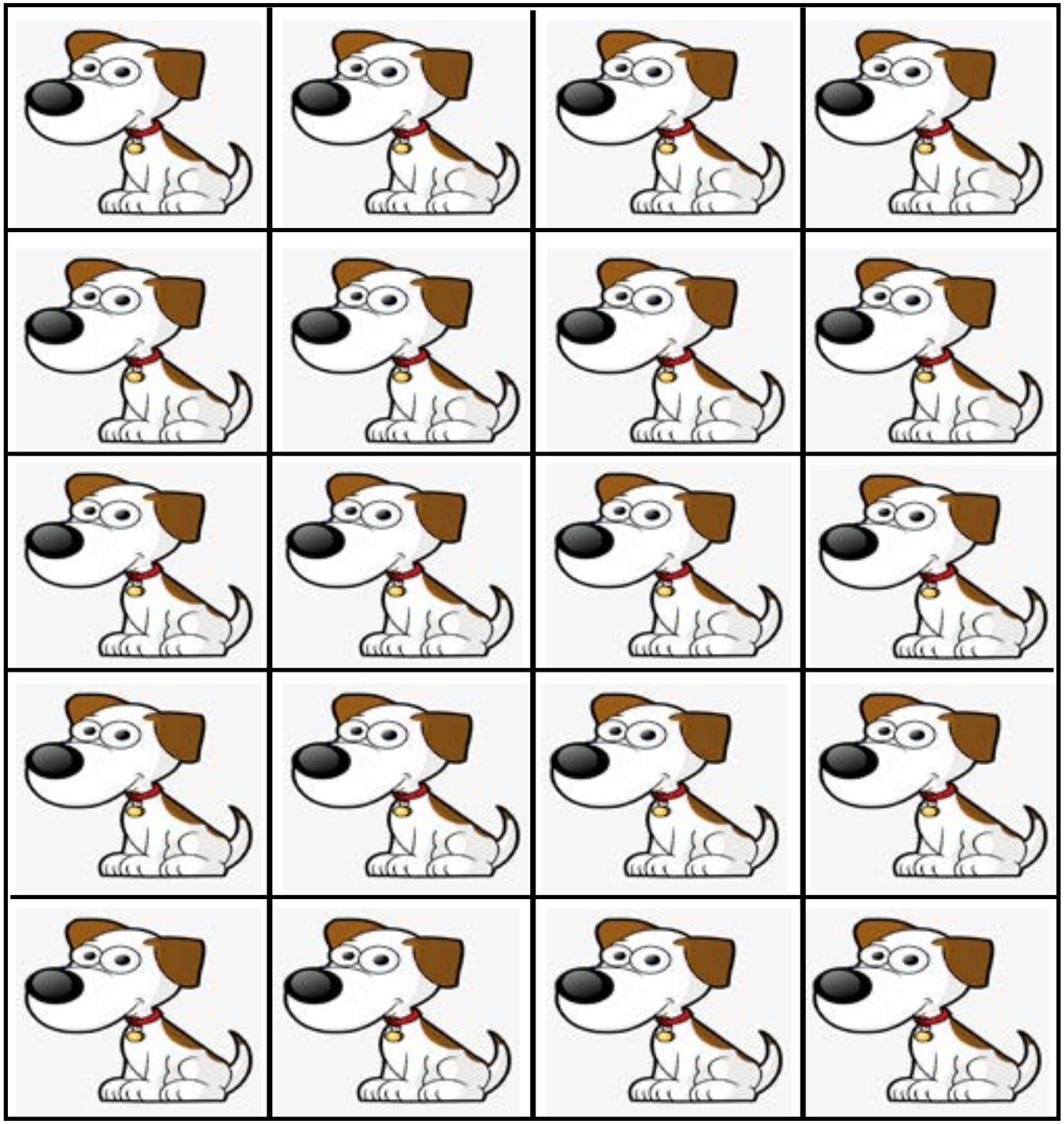
Drawing

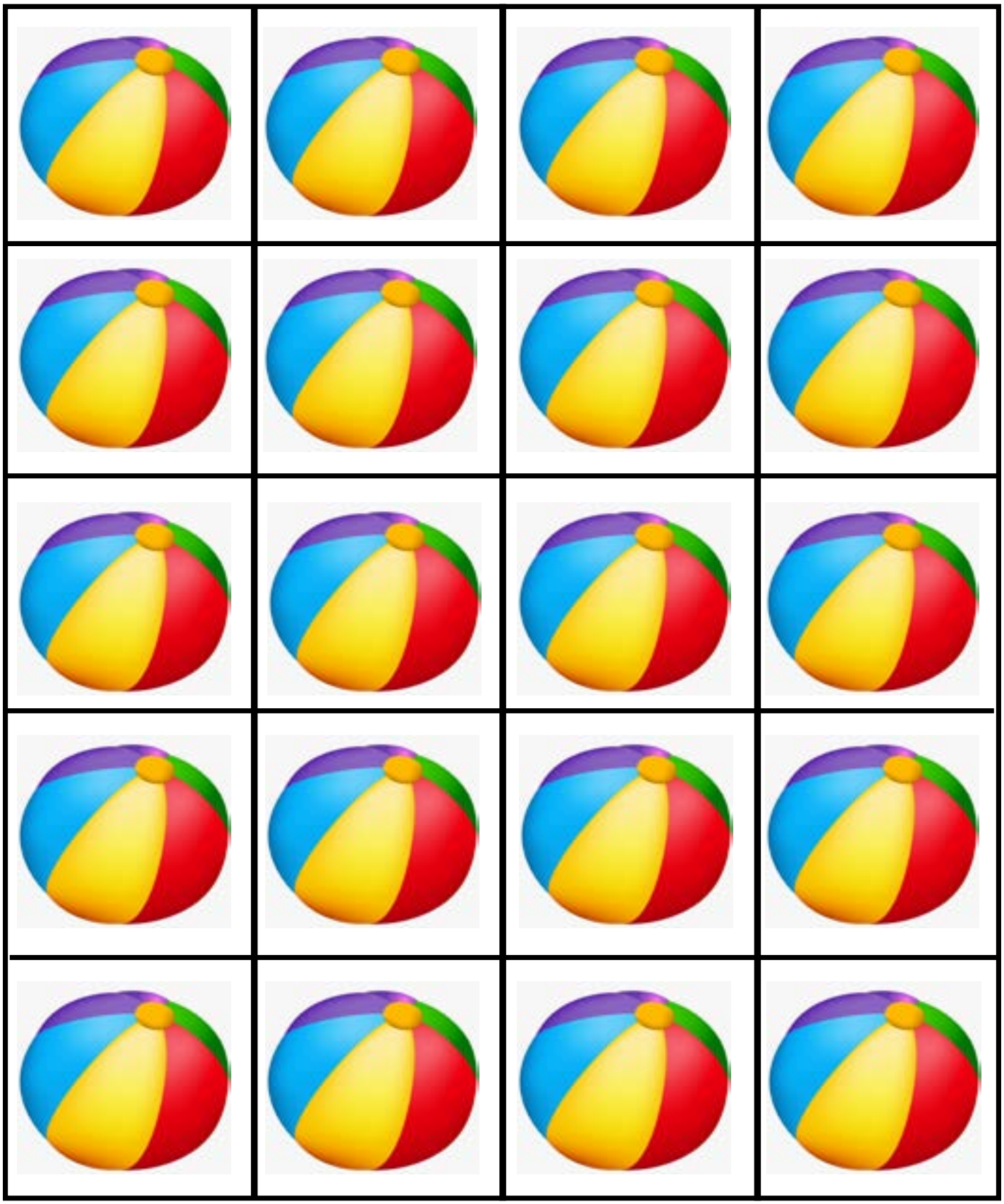
Twenty Frame

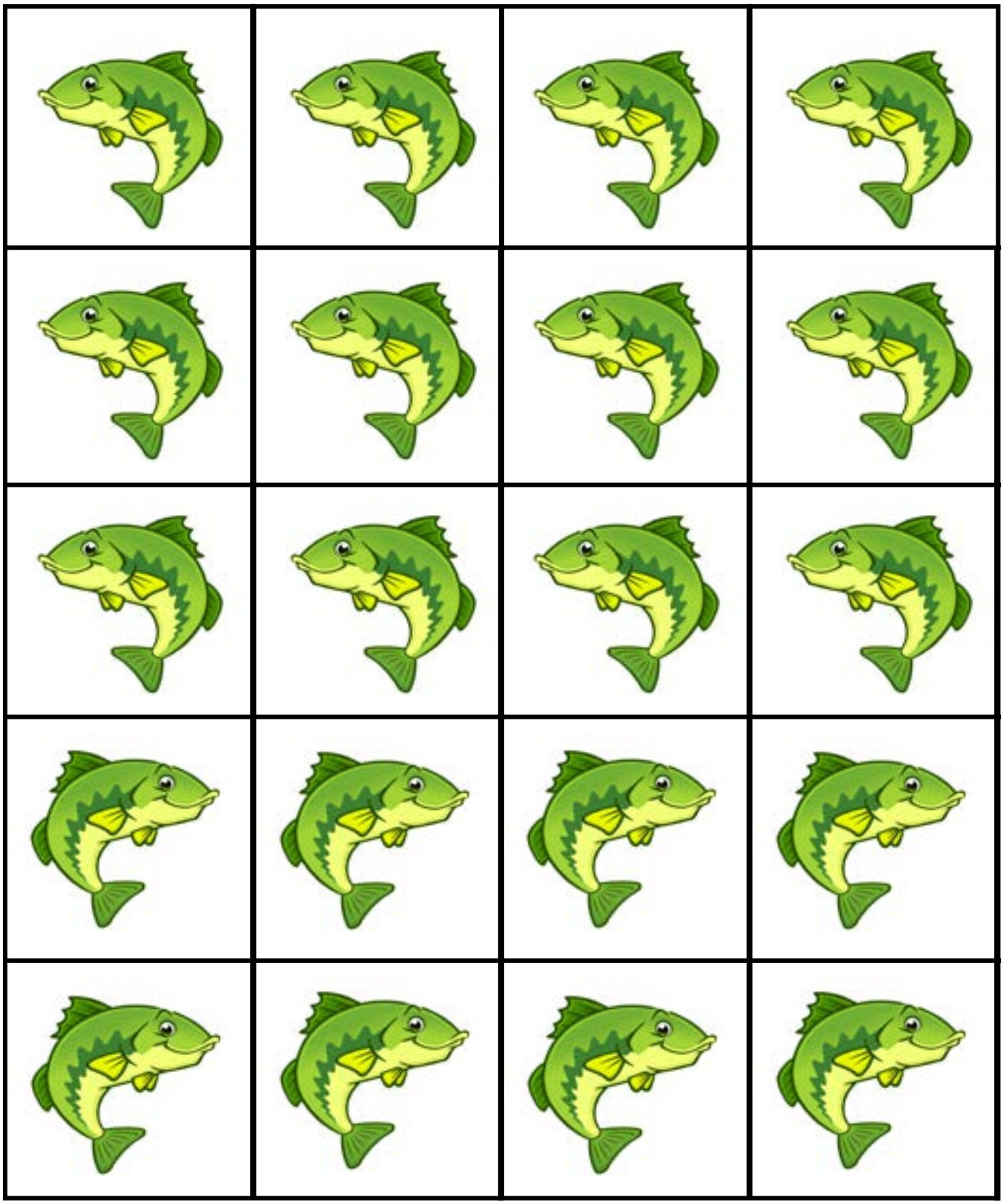
Answer Equation	Answer:
___ + ___ = ___	_____ Balls

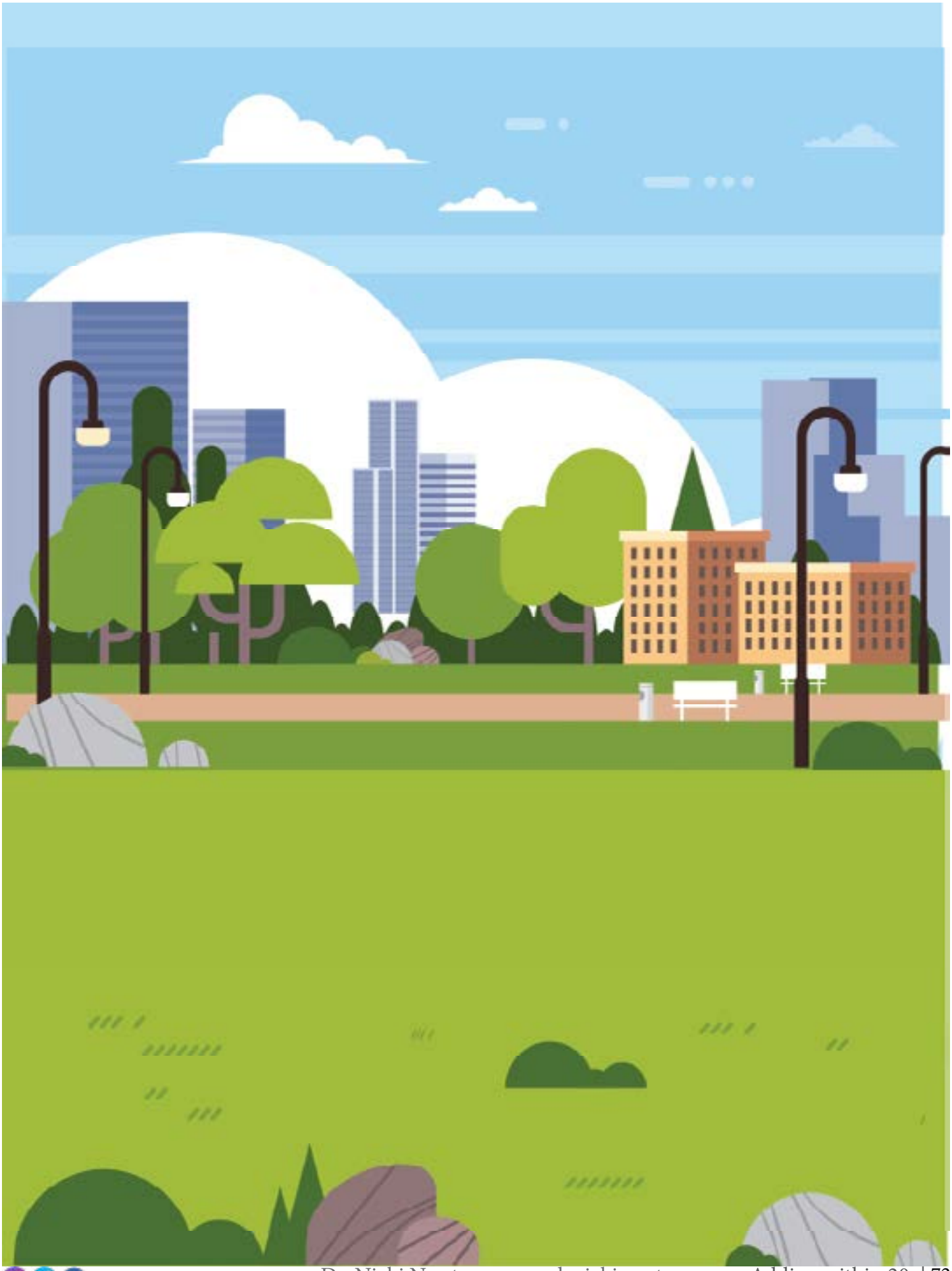
STORY TELLING MATS

Pull a flashcard and act it out on the story mat.
Draw a picture of your story. Write the equation.









Adding Within 20 Flashcards

Pull and tell a story using the expression!

12+6	11+4	16+1
10+3	13+3	17+1
15+1	12+2	15+3
17+2	14+4	11+6
10+1	12+5	11+5

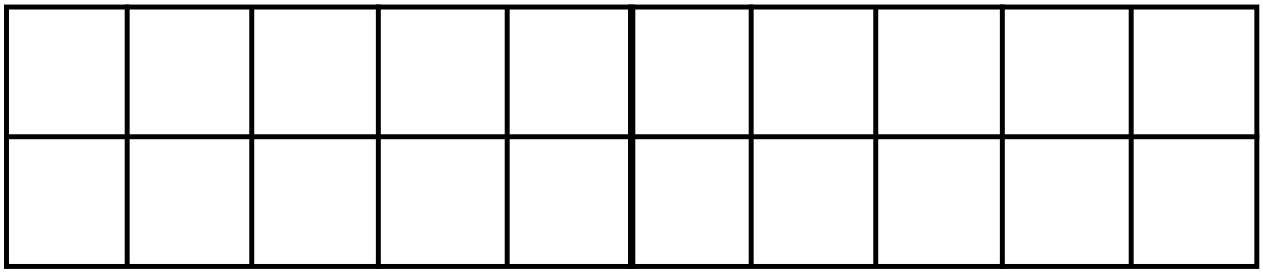
Word Problem Recording Sheet

Draw a picture of your story.

Write your equation.

_____ + _____ = _____

Show it on the twenty frame.



Model it on the number path.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

Number Bonds

Goal
Students focus on adding within 20.

Way to Play
Use manipulatives and numbers to fill out a number bond template.

Materials
Big Number Bond Template.
Number Bond Recording Sheet.

Scaffolding the Game
There are 2 sets of flashcards.
Set A: Number Bond flashcards.
Set B: Regular flashcards.

Directions

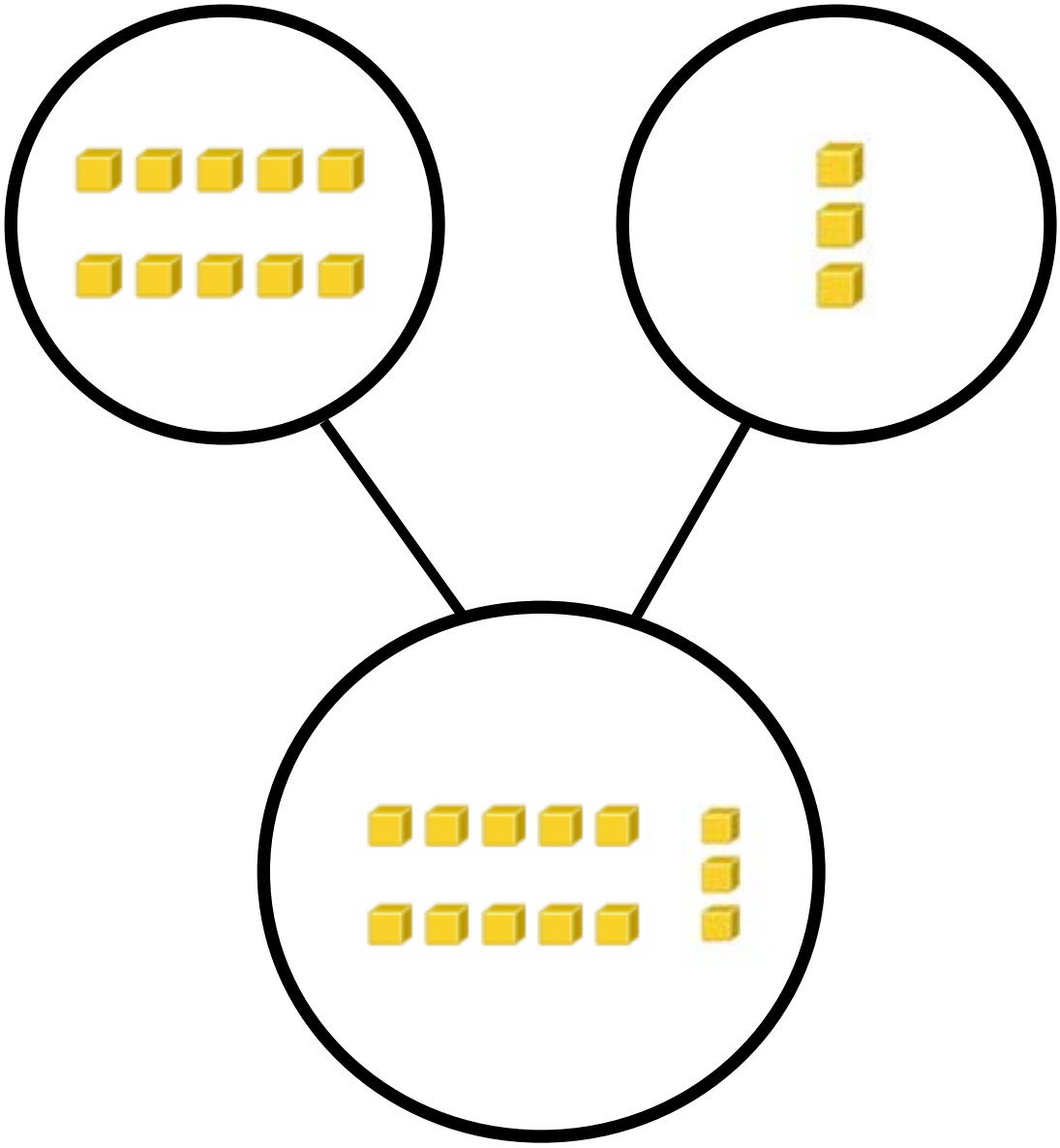
Activity 1
Pull a flashcard.
Rebuild it on a number bond template using manipulatives (base ten blocks), then draw on recording sheet.

Activity 2
Pull a flashcard.
Rebuild it on a number bond template.
Write the numbers on the number bond recording sheet.
Solve.

Use your math words:
My problem was _____. My strategy was_____ My sum is _____.

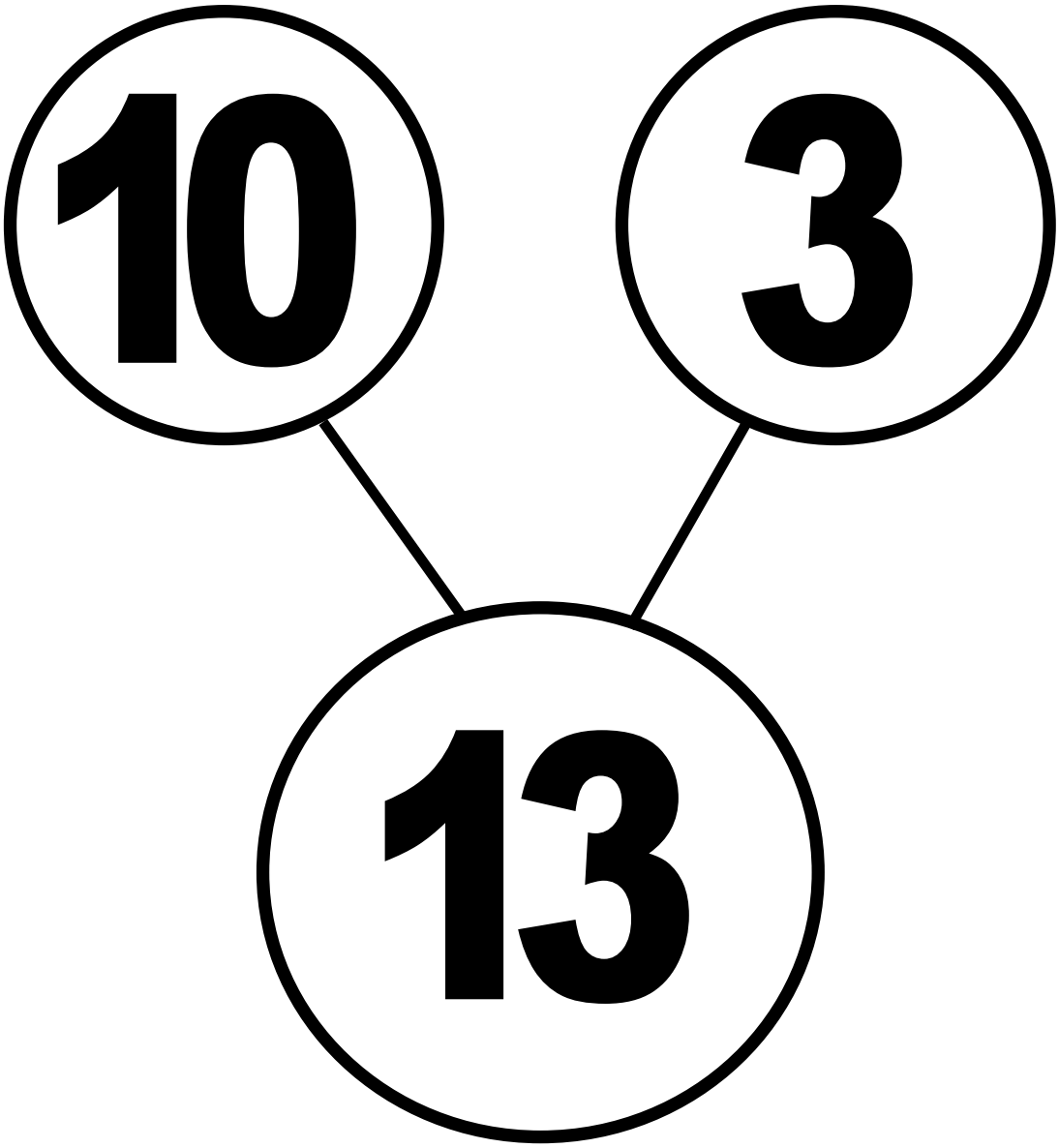
Number Bond Machine

10 + 3 = 13
13 = 10 + 3



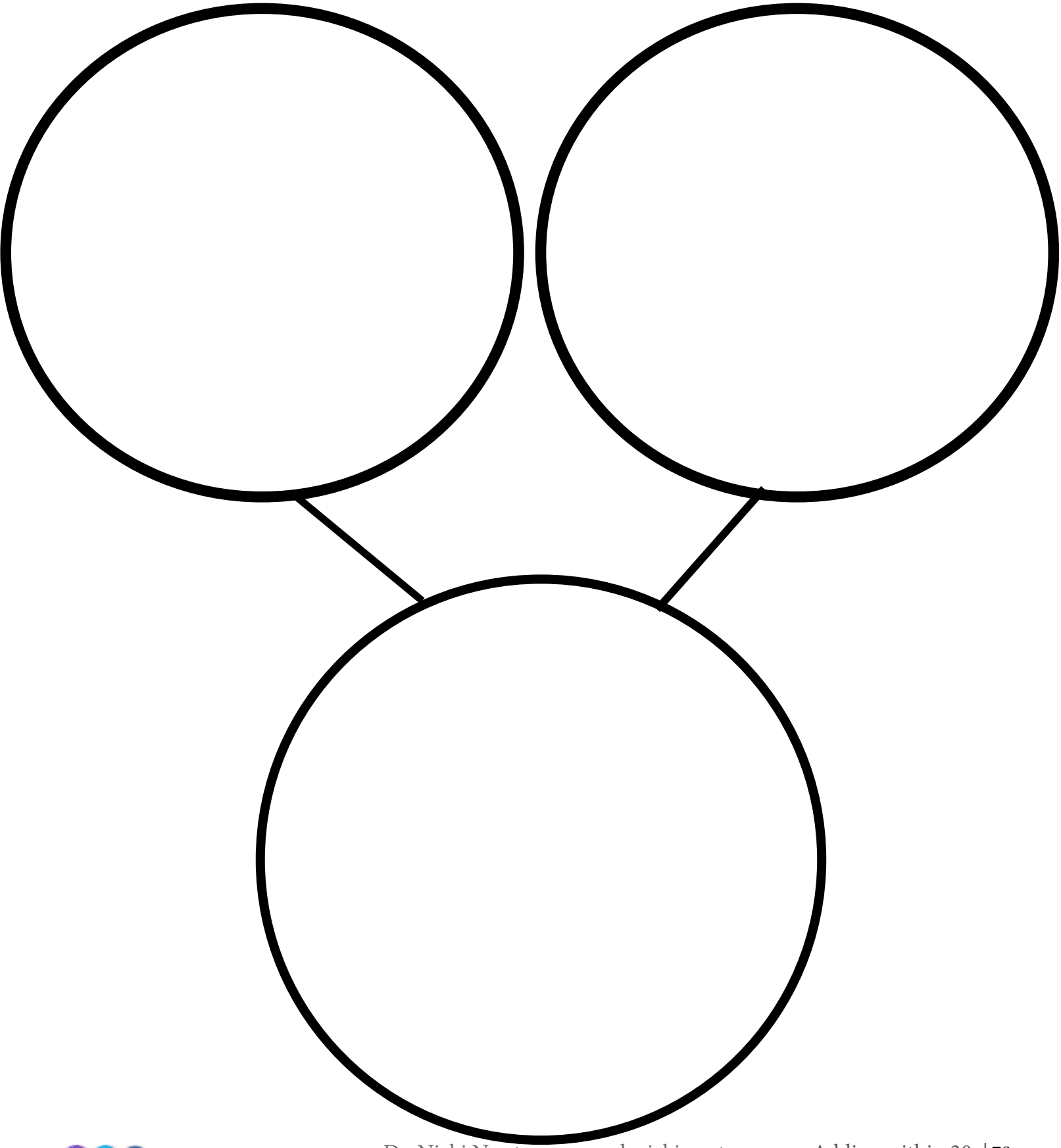
Number Bond Machine

$$10 + 3 = 13$$
$$13 = 10 + 3$$

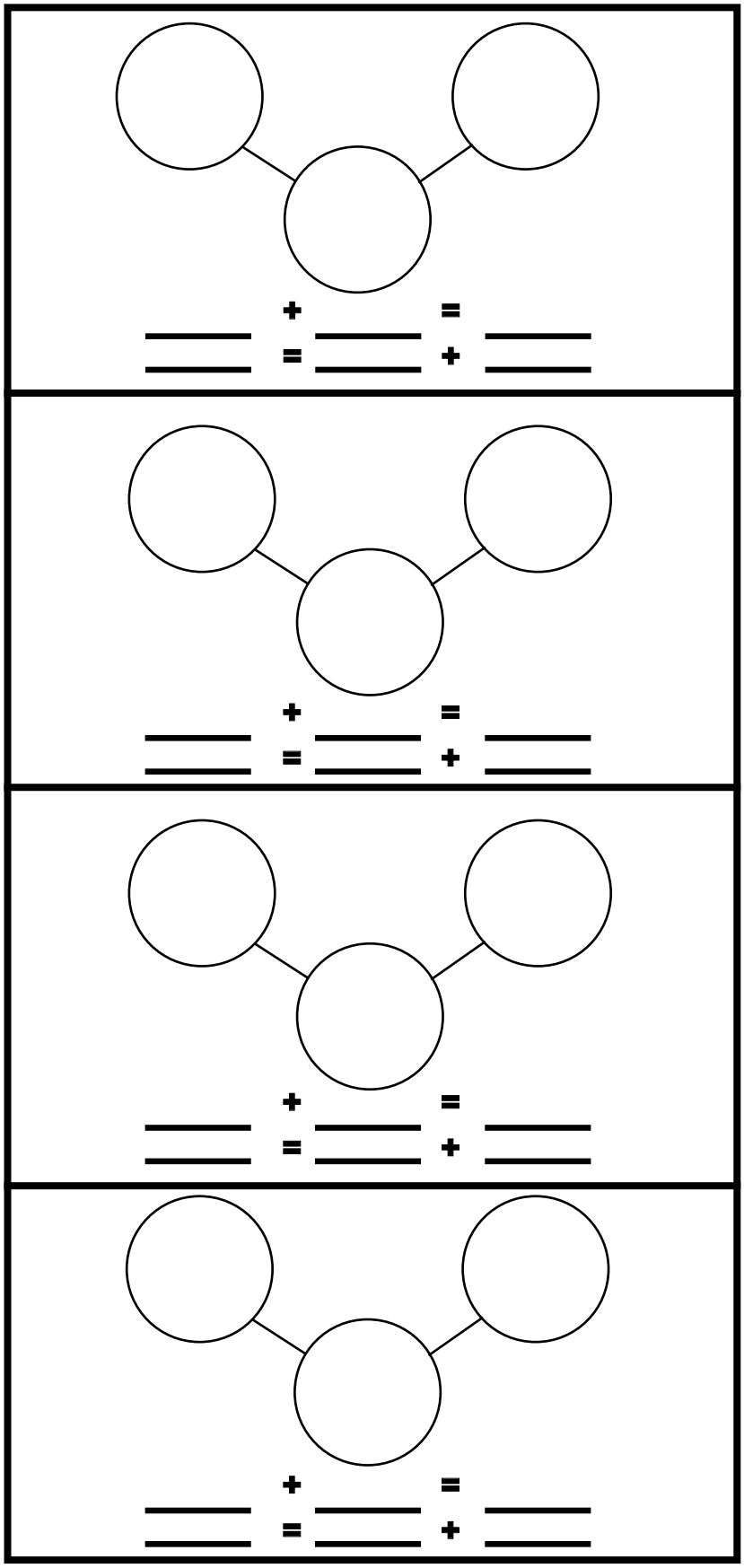


Number Bond Template

Use this template to add with manipulatives.



Recording Sheet for Number Bond Activity



Draw a picture

Goal
Students focus on adding within 20.

Activity
Students will pick a card and draw a picture.

Materials
Picture template and
Recording sheet

Scaffolding the Game
There are 2 sets of flashcards.
Set A: Flashcards with pictures.
Set B: Regular flashcards.

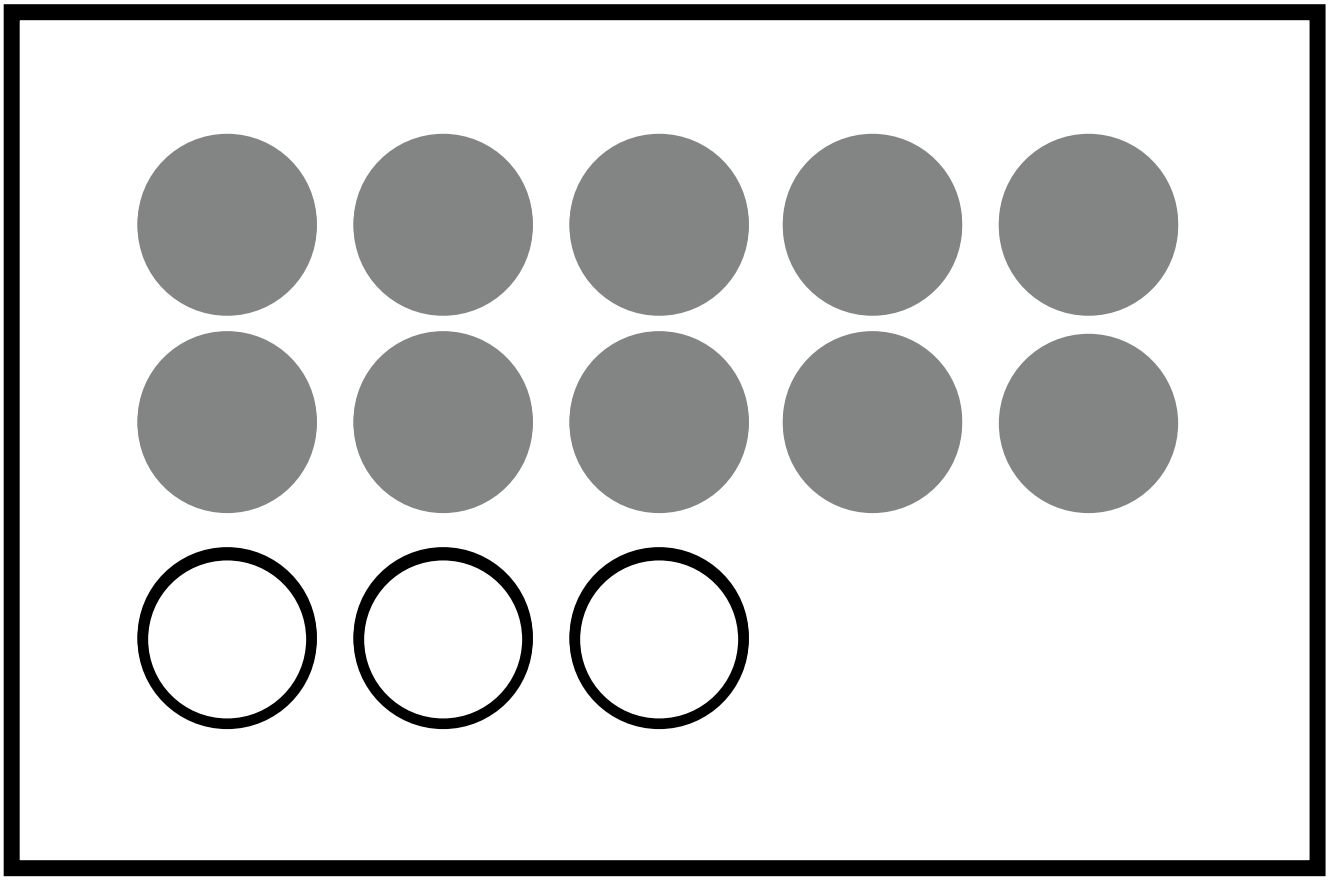
Directions

Activity 1
Pull an adding within 20 Flashcard (p. 25).
Draw the picture on the recording sheet for pictures. (Use double ten frames, number lines, or number paths.)

Activity 2
Pull a picture flashcard and say the number sentence to your partner.

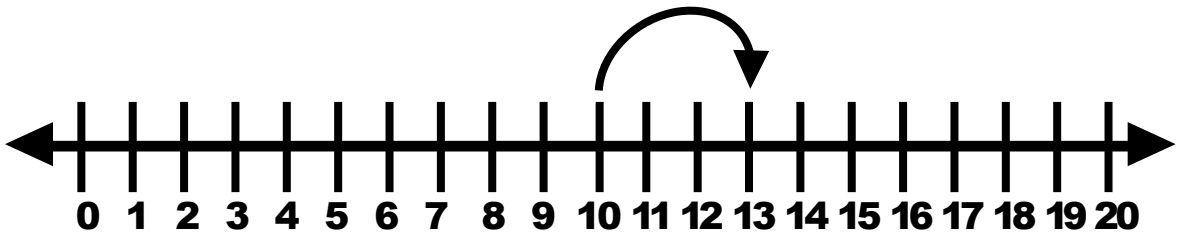
Use your math words:
My problem was _____. My strategy was_____ My sum is _____.

Draw a picture



10 + 3 = ?

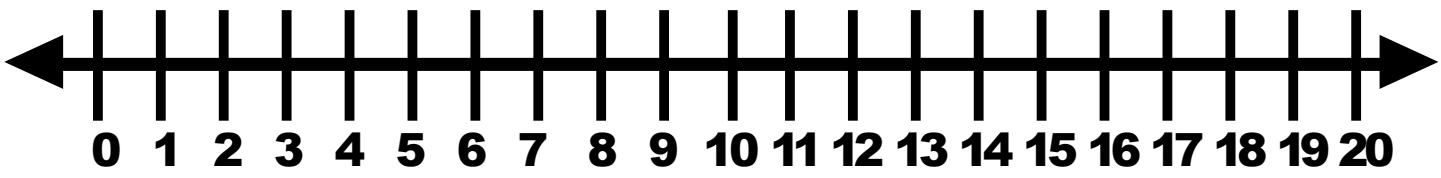
You can jump on the number line



Recording Sheet for Pictures

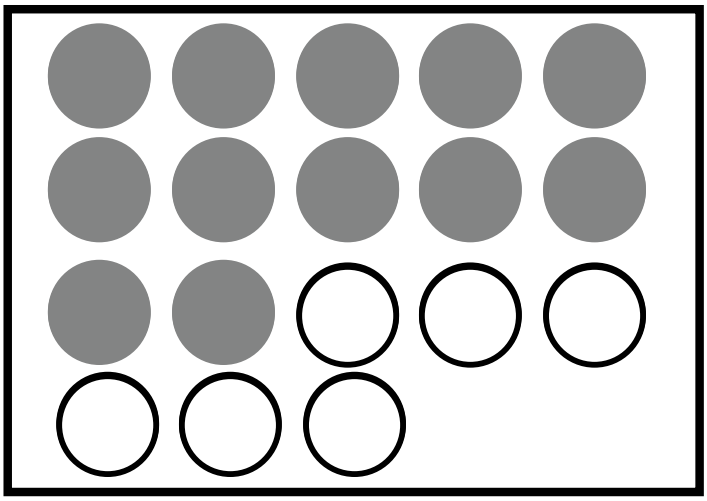
Pull a card. Illustrate the problem. Write the equation.

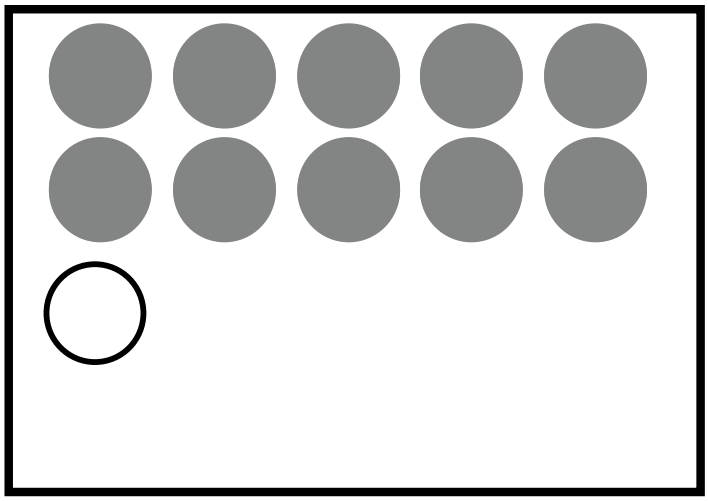
_____ + _____ = _____	_____ + _____ = _____
_____ + _____ = _____	_____ + _____ = _____
_____ + _____ = _____	_____ + _____ = _____

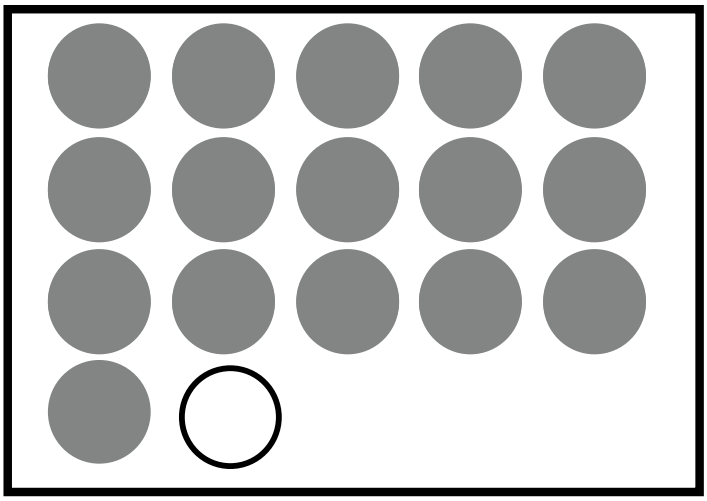


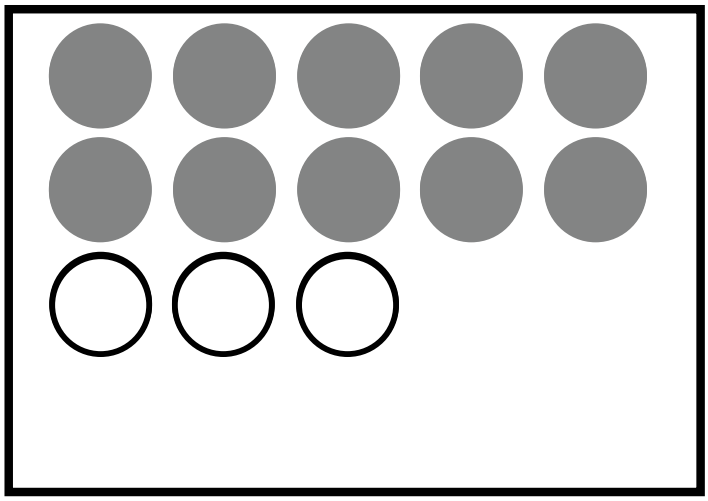
Picture Flashcards

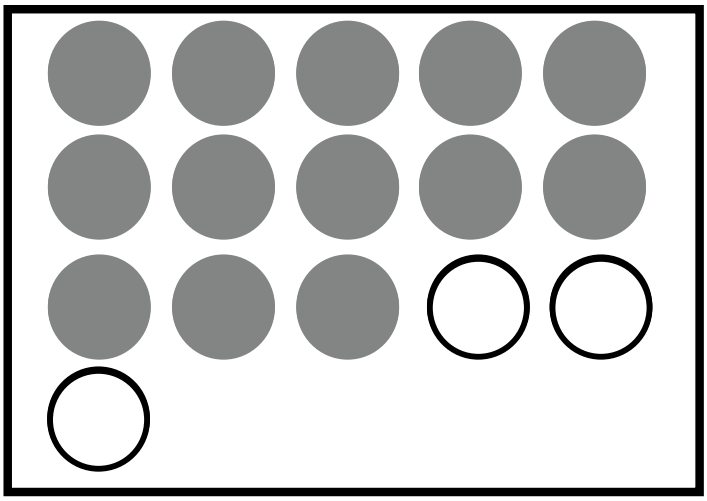
Pull a flashcard and tell your partner the number sentence.

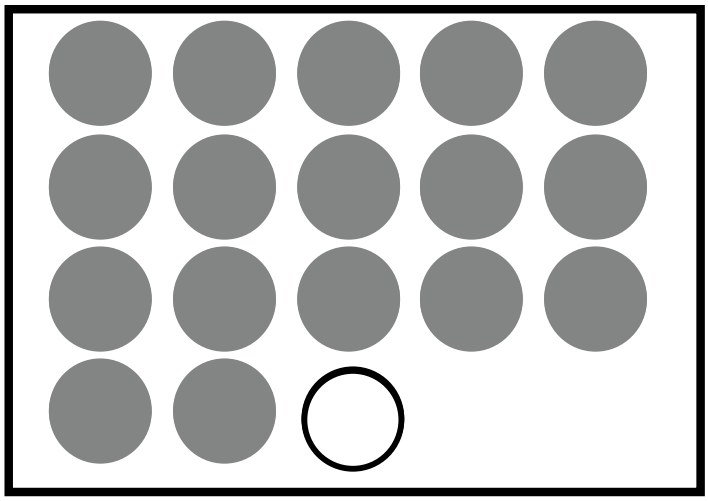






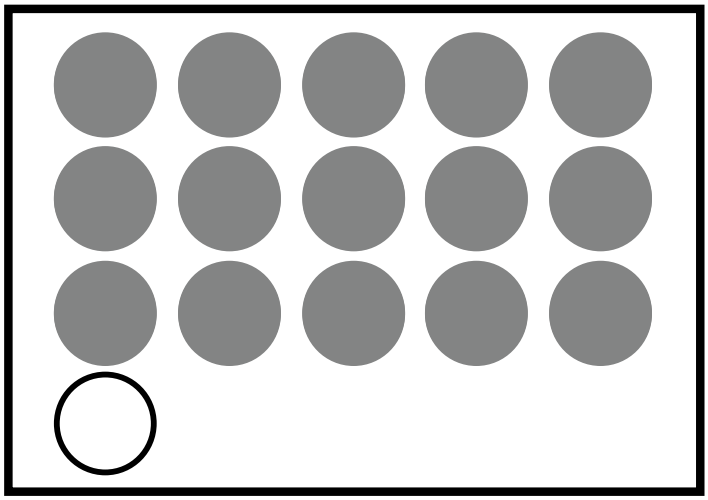


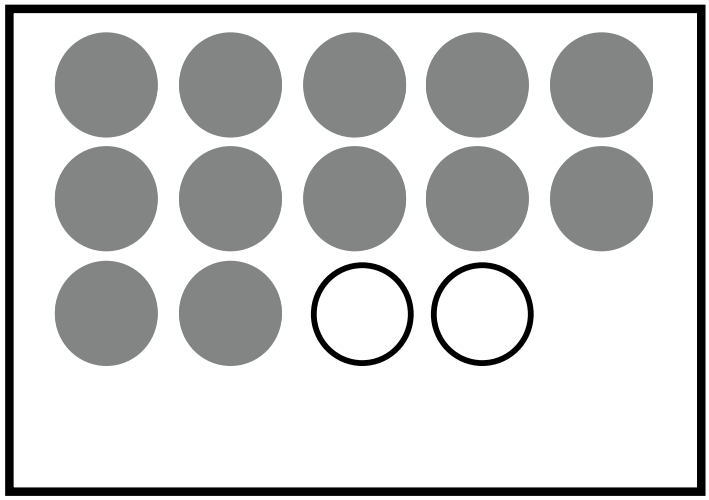


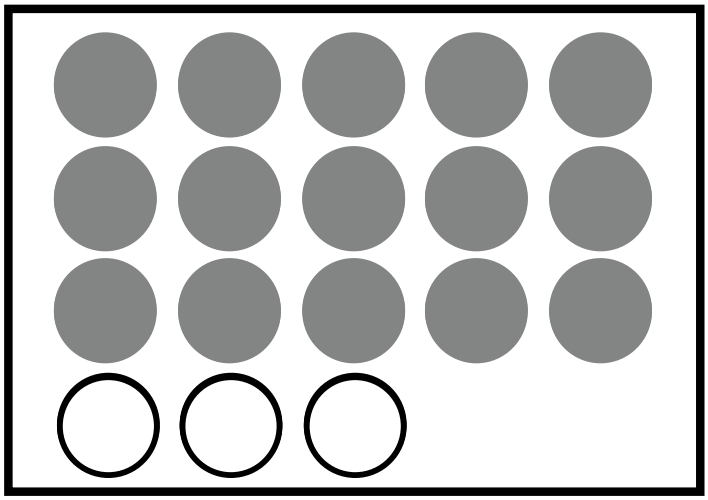


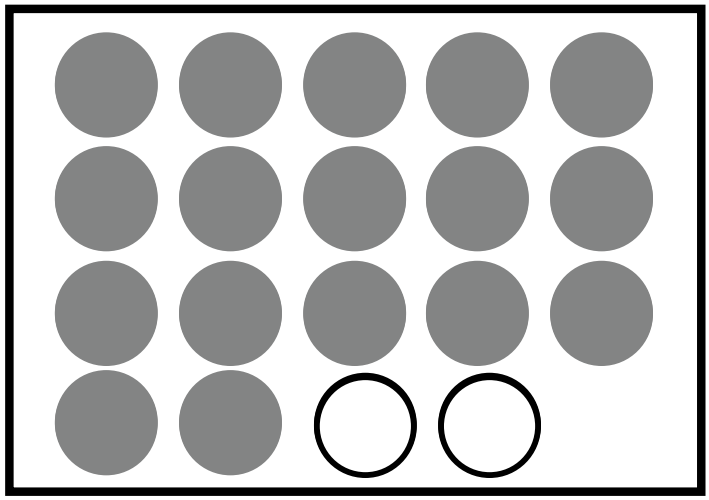
Picture Flashcards

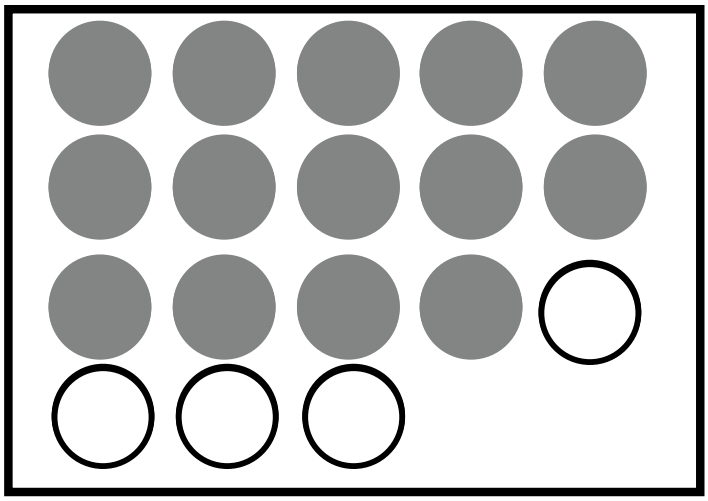
Pull a flashcard and tell your partner the number sentence.

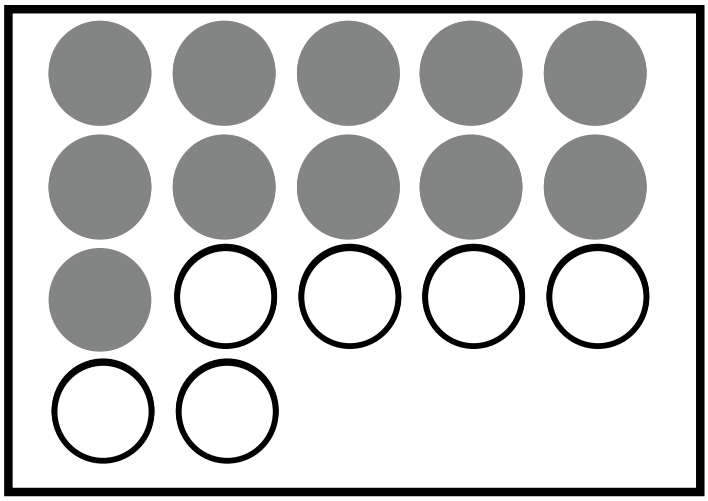






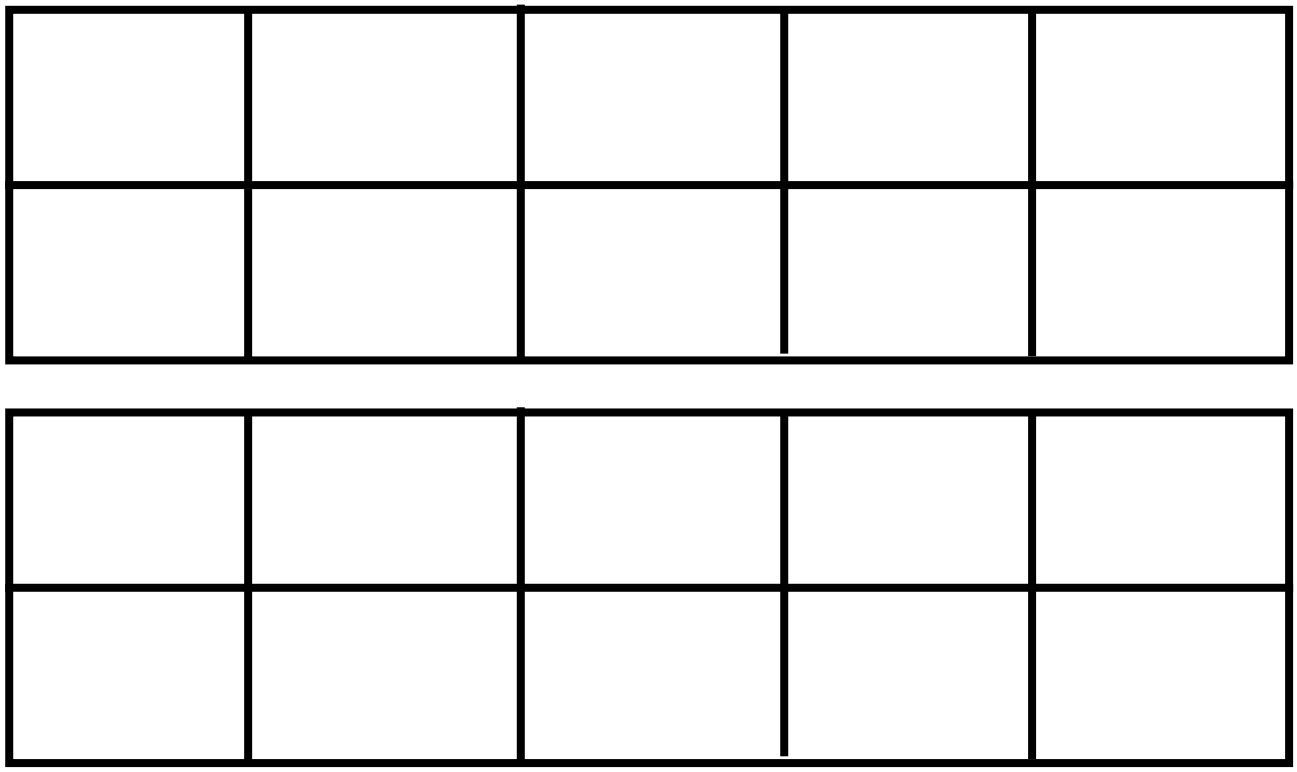






Model the facts

Model it on the Double Ten Frame



Model it on the Number Path

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

Draw a picture showing adding within 20 fact!

Write some adding within 20 facts

Flashcards

Goal
Students focus on adding within 20.

Way to Play
Students place all cards face down. They take turns turning over the cards. Whoever has the largest sum wins those cards. When all the cards are gone, whoever has the most cards wins.
Students can also model using number lines or twenty frames.

Materials
Flashcards

Scaffolding the Game
There are 2 sets of flashcards.
Set A: Flashcards that model adding within 20.
Set B: Flashcards with missing addends.

Directions

Activity 1
Pull a flashcard.
Model it on the number line.
Say the problem out loud.
Solve.
Explain using your math words.

Activity 2
Students make up their own problems within 20. Model on the number line and solve.

Use your math words:
My problem was _____. I started with _____.
Then, I added _____ to it. My sum is _____.

SET A

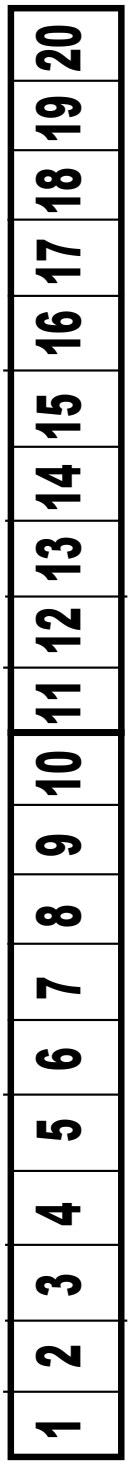
Adding Within 20 Facts!
12 + 2 =
11 + 4 =
15 + 1 =
11 + 5 =
10 + 3 =
16 + 1 =

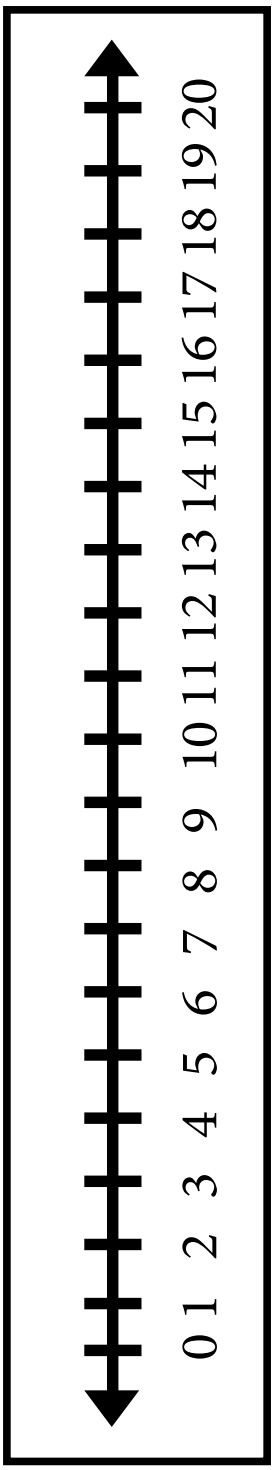
Adding Within 20 Facts!
11 + 6 =
14 + 4 =
9 + 11 =
12 + 6 =
13 + 3 =
17 + 2 =

SET B

12 + __ = 14	16 + __ = 17
__ +1 = 18	11 + __ = 16
15 + __ = 18	11 + __ = 15
16 = 13 + __	18 = 14 + __
13 = __ + 3	17 = __ + 5
11 = __ + 1	18 = 12 + __
19 = __ + 2	15 + __ = 16
17 = 11+ __	**Adding Within 20 Flashcards**

Use the number line or number path if you need help!





Superhero Addition Adding Within 20 Facts

Directions: Pull a flashcard and the person with the highest number goes first. Pull a card and match the sum with an expression on the board. Whoever gets 4 in a row wins!

18+1	12+5	19+1	11+2	14+6
11+6	14+4	17+2	11+1	10+5
15+3	12+2	15+5	11+6	12+3
17+1	13+3	10+3	15+1	10+1
16+1	11+4	12+6	11+5	13+5

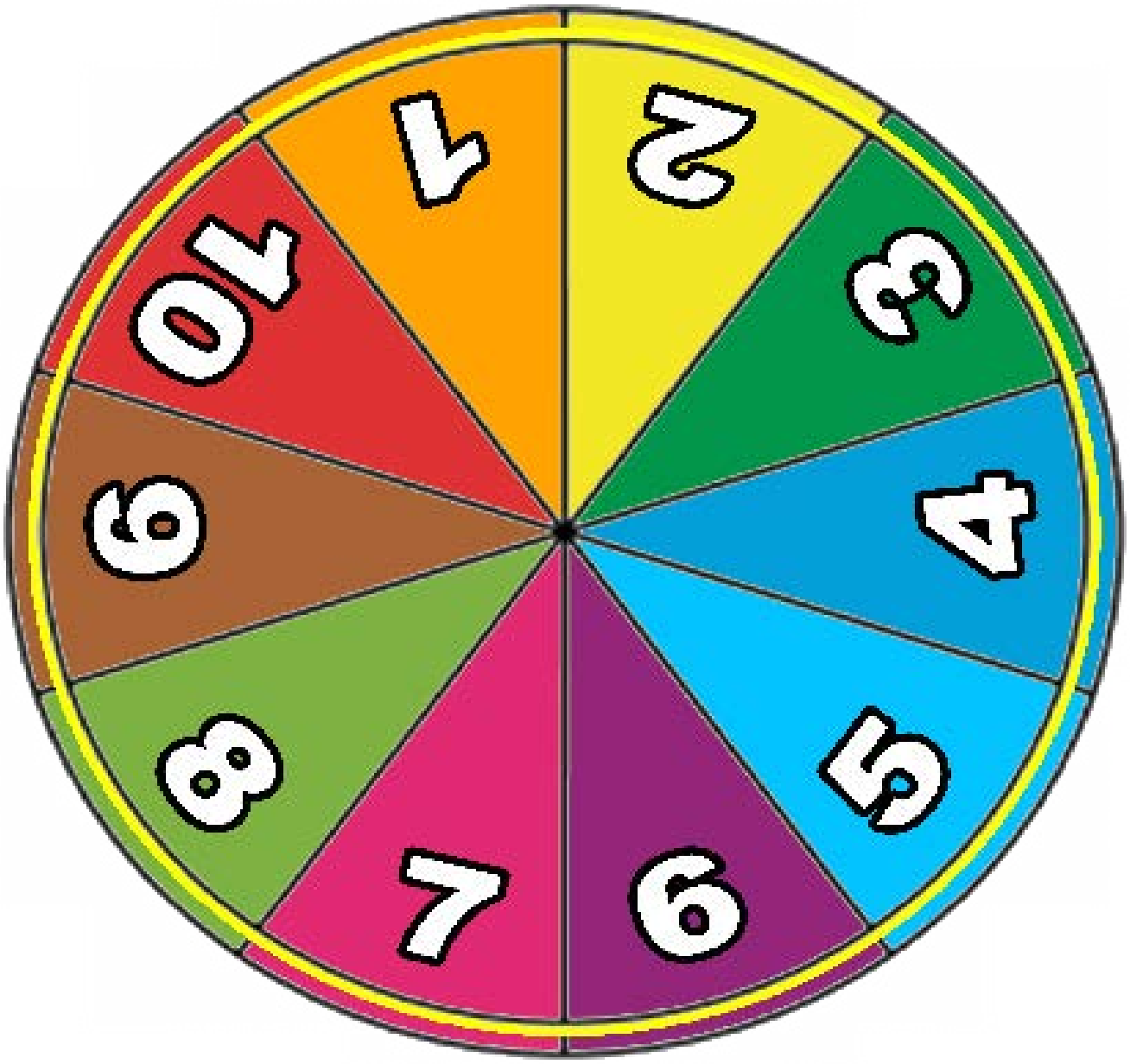
GAMEBOARD

NUMBER CARDS

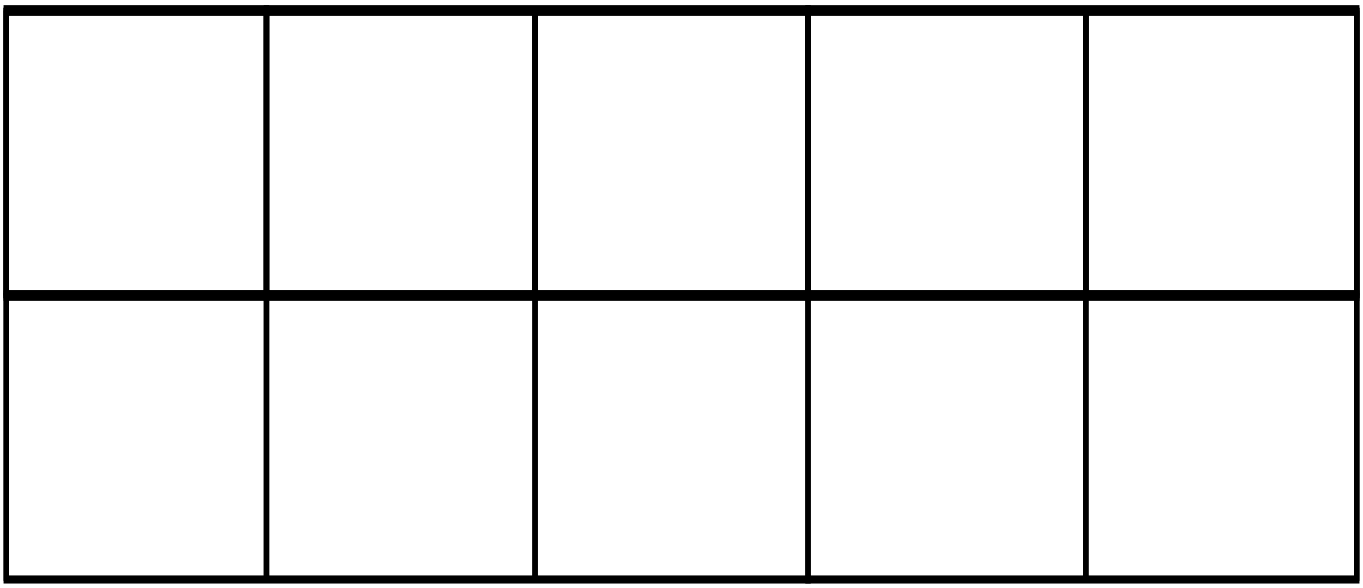
11	16	18
13	16	18
14	17	18
15	17	19
16	17	20

SPINNER GAME

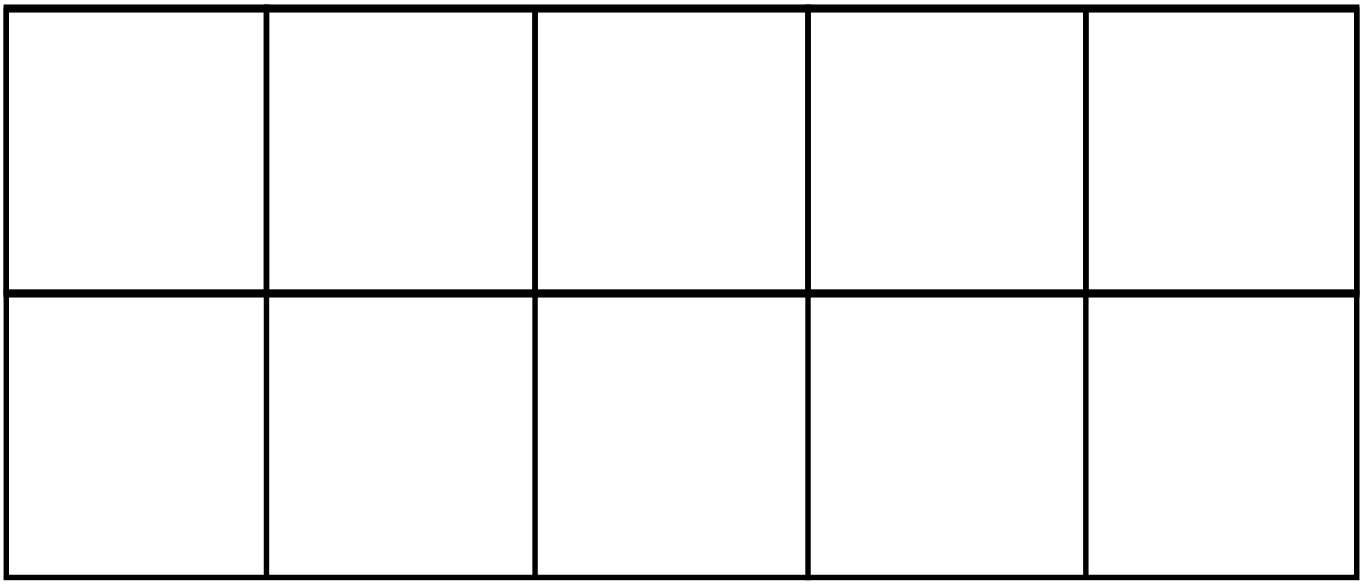
Each partner spins twice and adds the numbers. Whoever gets the largest sum gets a counter. Keep track of the score in the ten frame. Whoever gets 10 counters first wins.



PARTNER A



PARTNER B



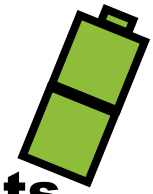
GAMEBOARD

Use set A Flashcards. Players get the same number of cards. Play war. Each player writes his/her equation on his/her side. Write > or < to compare the equations.

Player 1	Compare your equations with a symbol: < = >	Player 2
____ + ____ = ____		____ + ____ = ____
____ + ____ = ____		____ + ____ = ____
____ + ____ = ____		____ + ____ = ____
____ + ____ = ____		____ + ____ = ____

____ + ____ = ____		____ + ____ = ____
____ + ____ = ____		____ + ____ = ____
____ + ____ = ____		____ + ____ = ____
____ + ____ = ____		____ + ____ = ____
____ + ____ = ____		____ + ____ = ____
____ + ____ = ____		____ + ____ = ____

BUMP GAME



Addition Adding within 20 Facts

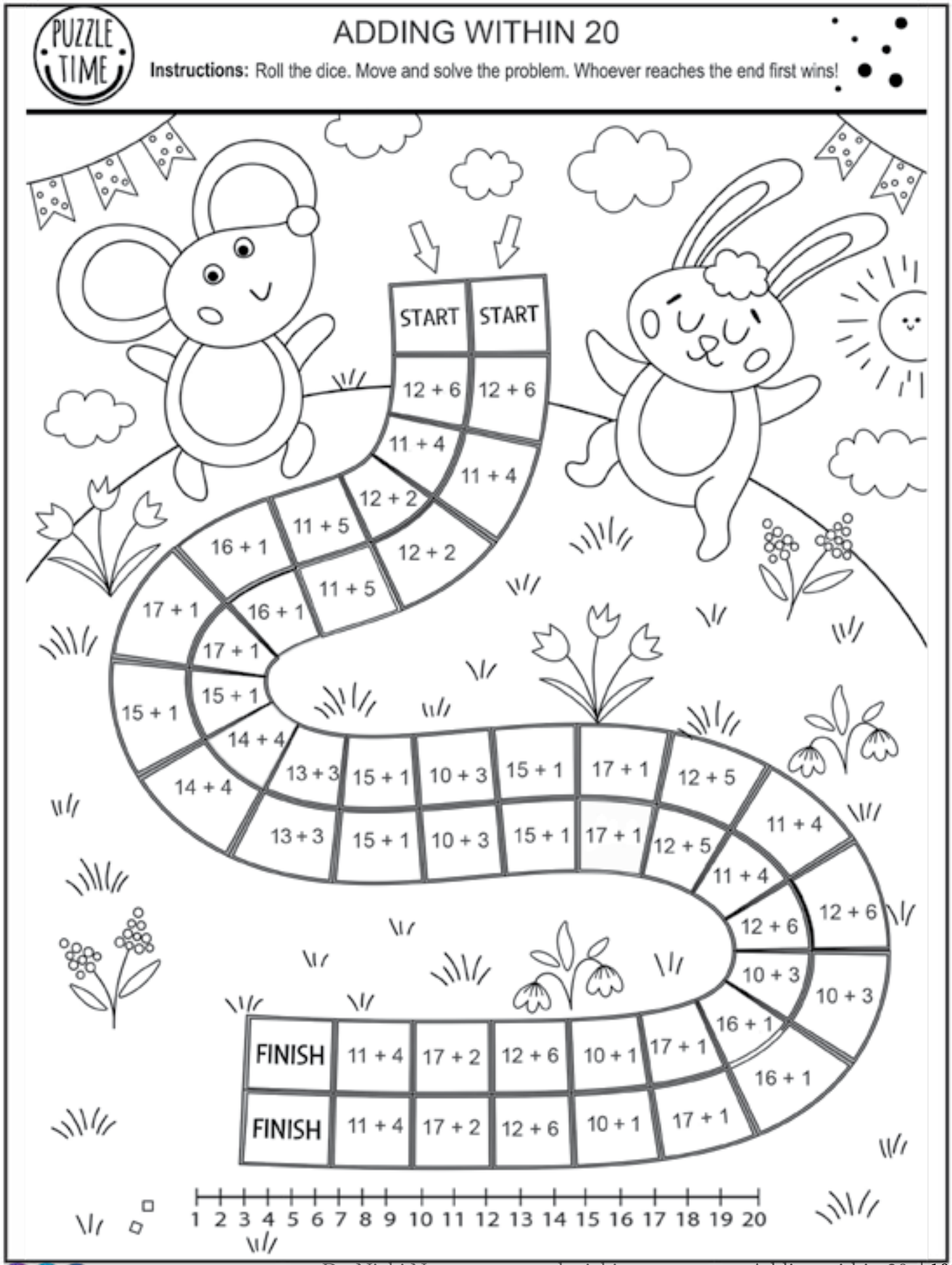
10+1	13+3	11+6	18+2	10+3
11+4	11+1	12+2	14+4	12+5
16+1	17+1	15+3	19+1	11+5
12+6	11+9	15+1	17+2	12+7

Use the number cards. Pull a card. Whoever has the highest number goes first. Player 1 pulls a card and finds the expression for that sum and covers it up. If player 2 pulls an expression for the same sum, they can bump player 1 off. If a player has 2 cubes on a space they have captured the space. Whoever captures the most spaces wins.

NUMBER CARDS

11	16	18
12	16	18
13	17	19
14	17	20
15	17	20

GAMEBOARD


PUZZLE TIME
ADDING WITHIN 20
Instructions: Roll the dice. Move and solve the problem. Whoever reaches the end first wins!
START
START
12 + 6
12 + 6
11 + 4
11 + 4
12 + 2
12 + 2
11 + 5
11 + 5
16 + 1
16 + 1
17 + 1
17 + 1
15 + 1
15 + 1
14 + 4
14 + 4
13 + 3
13 + 3
15 + 1
15 + 1
10 + 3
10 + 3
15 + 1
15 + 1
17 + 1
17 + 1
12 + 5
12 + 5
11 + 4
11 + 4
12 + 6
12 + 6
10 + 3
10 + 3
16 + 1
16 + 1
17 + 1
17 + 1
10 + 1
10 + 1
12 + 6
12 + 6
17 + 2
17 + 2
11 + 4
11 + 4
FINISH
FINISH
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

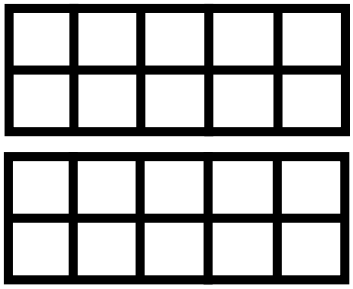
Adding Within 20 Quiz

Match the expression and the sum!

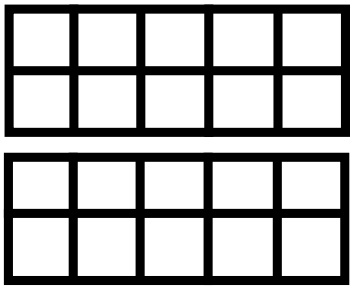
14 + 4	16
10 + 1	14
11 + 6	11
13 + 3	18
12 + 2	17

Model an Adding Within 20 fact

_____ + _____ = _____



Show 12 + 6



Solve:

Jenny had 11 marbles. She got 4 more. How many does she have now?

Make the equations true.

19 = 18 + _____

11 = 9 + _____

Performance Quiz and Oral Interview		
1. What is addition?	2. Can you pick a flashcard and model one for me on a double ten frame?	3. Can you pick a flashcard and model one for me on the number path or number line?
4. Model this with your counters. Todd had 12 marbles. He got 6 more. How many does he have now?	5. Show the student a few flashcards to see how they solve the problems.	6. What is easy and what is tricky about learning addition.

STUDENTS	Plus 0	Plus 1	Count on	Adding within 5	Lower Doubles	Doubles	Doubles +1	Doubles +2	Bridge 7	Bridge 8	Bridge 9	Make 10	Add 10	Adding within 20	Make 20