

# Welcome to Math Night Part 2



# **1<sup>st</sup> Grade Georgia Standards of Excellence Math is NOT**

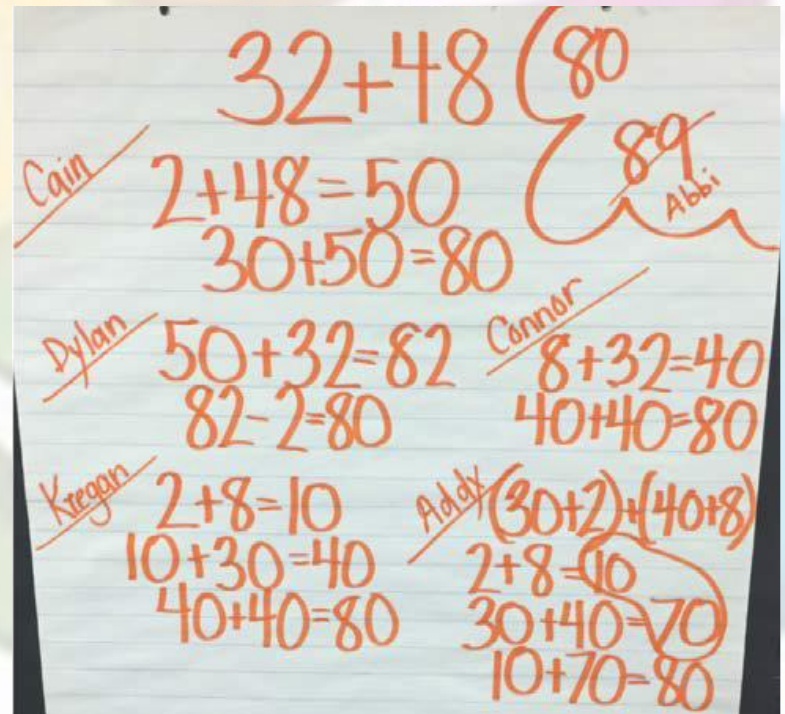
**Worksheets**

**Memorization**

**Sitting still  
and quiet**

# What are the goals for your child this year in mathematics?

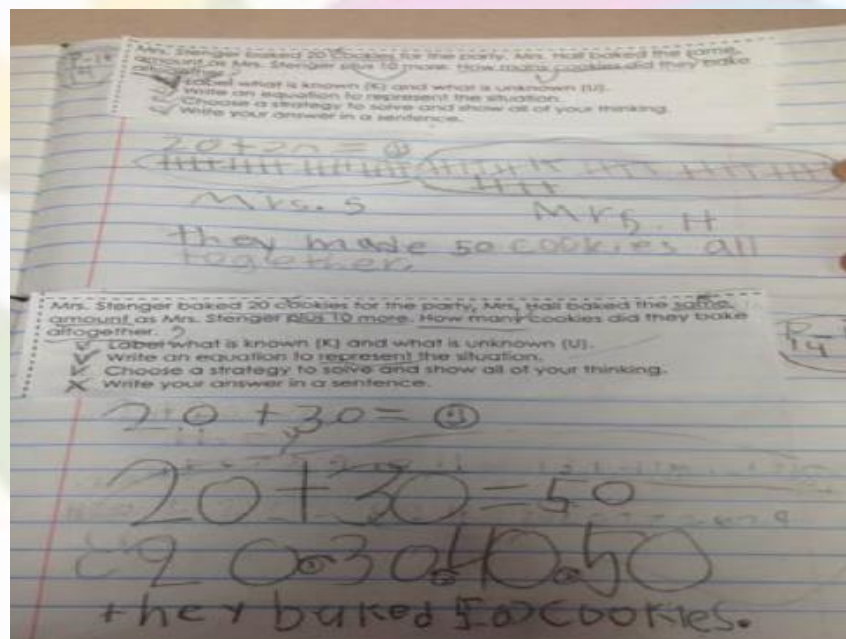
- **Procedural Fluency**
  - ❖ Being able to carry out procedures flexibly, accurately, efficiently, and appropriately



- **Conceptual Understanding**
  - ❖ Understanding concepts, operations, and relationships (WHY?)

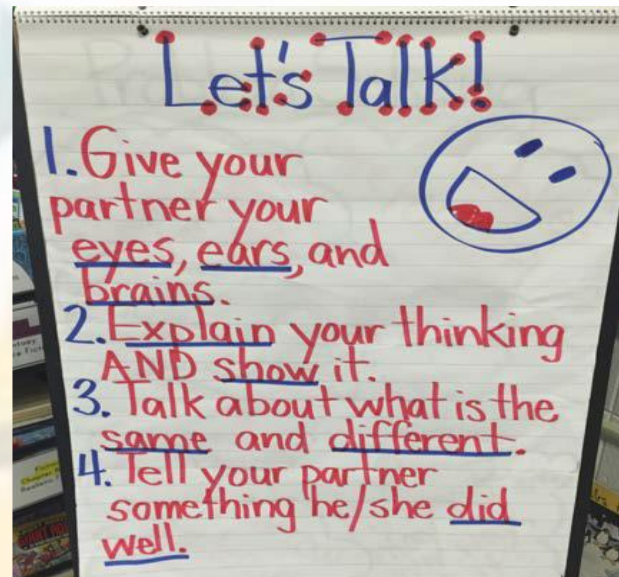


- **Adaptive Reasoning**
  - ❖ Being able to formulate, represent, and solve mathematical problems (HOW?)



- **Strategic Competence**

- ❖ Reflecting, explaining, and justifying



- **Productive Disposition**

- ❖ Having positive feelings about mathematics and his/her ability to learn and grow



So, what are 1st  
grade priorities?

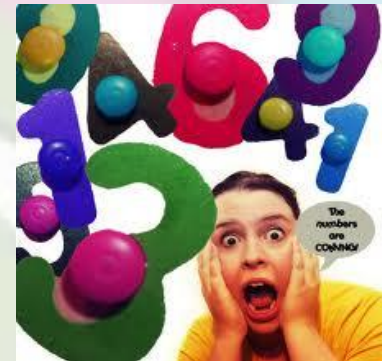
Skills

Strategies

Deeper Understanding

# Skills we are still working on:

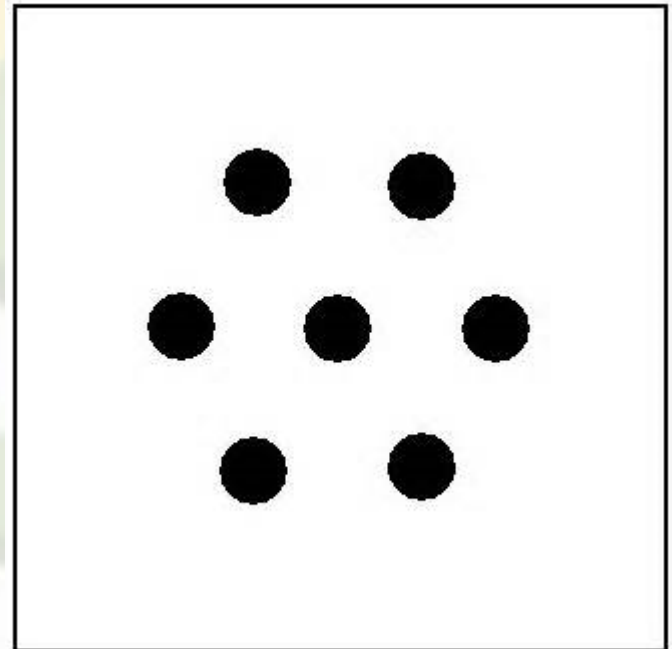
- Developing number sense
- Addition and Subtraction with numbers within 20
- Word Problems
- Fluency of number combinations to 10



# Number Sense / Number Relationships

7

- More than 4
- Less than 9
- 3 and 4
- 2 and 5
- 3 away from 10





# Explaining/Showing your thinking in addition and subtraction:

- ❖ manipulatives
- ❖ drawing
- ❖ written words
- ❖ orally

# Ways to show your thinking!

$6 + 5 = \underline{\quad}$

$10 - 4 = \underline{\quad}$

- Drawing



11



6

- Written Words

I put the bigger number, 6, in my head and counted on the smaller number, 5.

6 7, 8, 9, 10, 11

or

I know that  $5+5$  equals 10 and 6 is one more than 5, so  $5+6$  equals 11.

I put the bigger number, 10, in my head and counted back the smaller number, 4.

10 9, 8, 7, 6

or

I know that  $6 + 4$  equals 10, so 10 take away 4 equals 6.

# Fluency to 10

Fluency is not memorizing a fact such as  $3+4=7$ . It is understanding all the ways 7 can be made or broken apart.

Example:

0 and 7

1 and 6

2 and 5

3 and 4

4 and 3

5 and 2

6 and 1

7 and 0

If you have 3, how many more do you need to make 7?

If you have 7 and give 5 away, how many do you have now?

Not just:  $3+4=7$

also:  $3 + \underline{\quad} = 7$

$7 = \underline{\quad} + 4$

$7 - \underline{\quad} = 3$

$\underline{\quad} = 7 - 4$

\* kids need to be able to know the relationship of 3 4 7 quickly

# + Addition Strategies

Making 10

$$8 + 4 = 12$$

$8 + 2 = 10$  (with a curved arrow from the 2 to the 8)

$$10 + 2 = 12$$

Counting On

$$12 + 4 = 16$$

Draw It

$$3 + 2 = 5$$



Doubles Facts

$$6 + 6 = 12$$

$$2 + 2 = 4$$

$$4 + 4 = 8$$

Doubles  
+ 1

$$\text{If } 5 + 5 = 10$$

then

$$5 + 6 = 11!$$

# Subtraction Strategies

1. Draw a picture

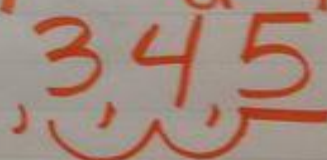

$$5 - 2 = \underline{\quad}$$


2. Fact Family (part, part, whole)

5	
2	?

$$5 - 2 = \underline{\quad}$$
$$\underline{\quad} + 2 = 5$$

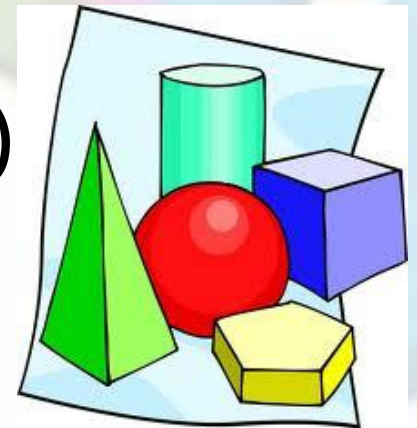
3. Count back by touch math or fingers

$$\textcircled{5} - 2 = \underline{\quad}$$


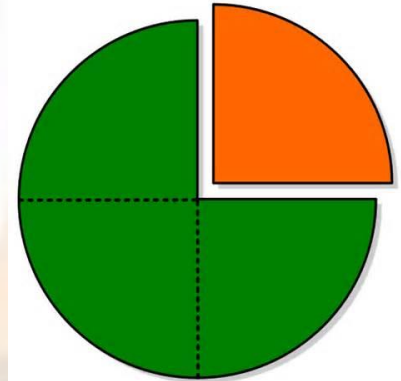
# Skills we are working on the second half of the year:

- Describing, Comparing  
and contrasting shapes

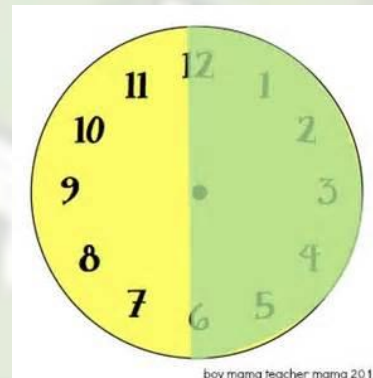
(triangles, rectangles, squares, trapezoids,  
half circle, quarter circle, cone,  
rectangular prism, cylinder, cube)



- Fractions : half and fourth



- Time: to the hour and half hour





- Understanding linear measurement



- Understanding place value (tens and ones)



• Double Digit Addition and Subtraction

• Explaining your thinking and reasoning



# Double Digit Addition

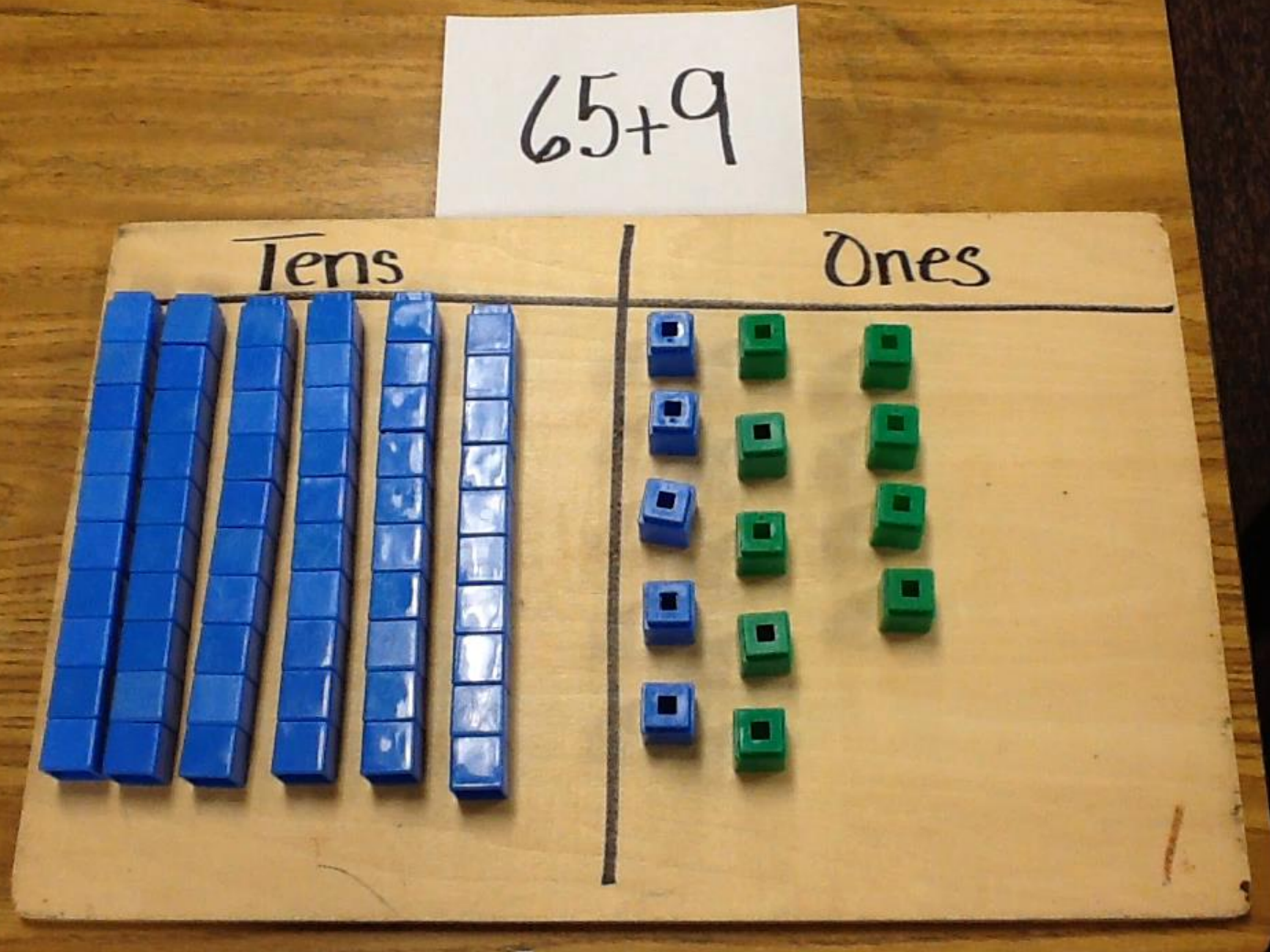
$$65 + 9$$

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Students will learn different strategies to solve this problem:

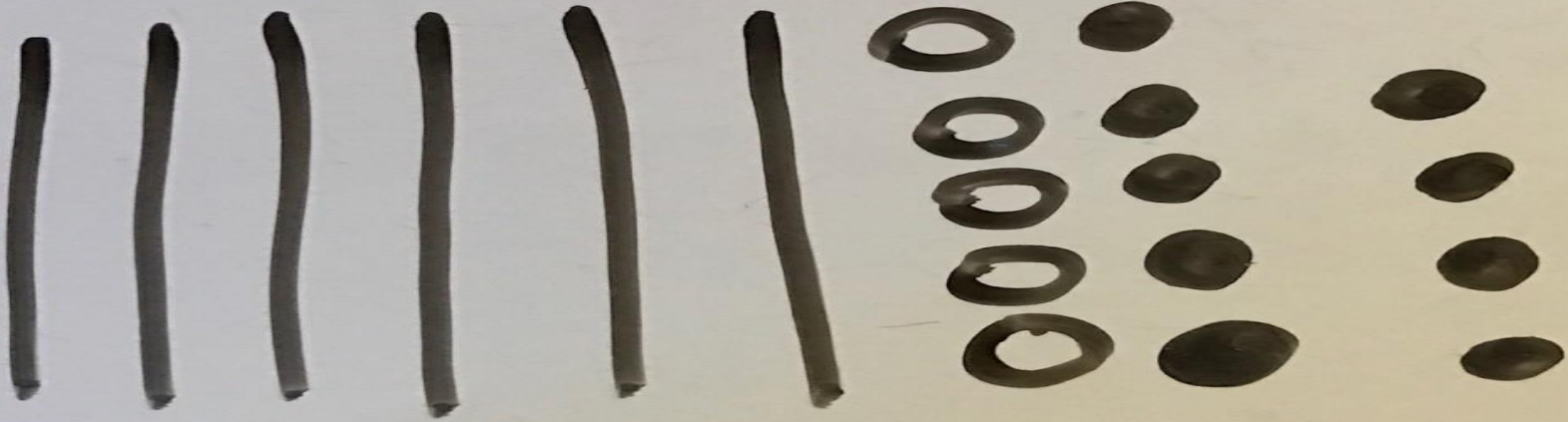
1. Manipulatives
2. Quick Draw
3. Ten frames
4. Branching (Tens and ones)
5. Making tens/friendly numbers

$$65 + 9 \text{ (using manipulatives)}$$



$$65 + 9 \text{ (using quick draw)}$$

65 + 9



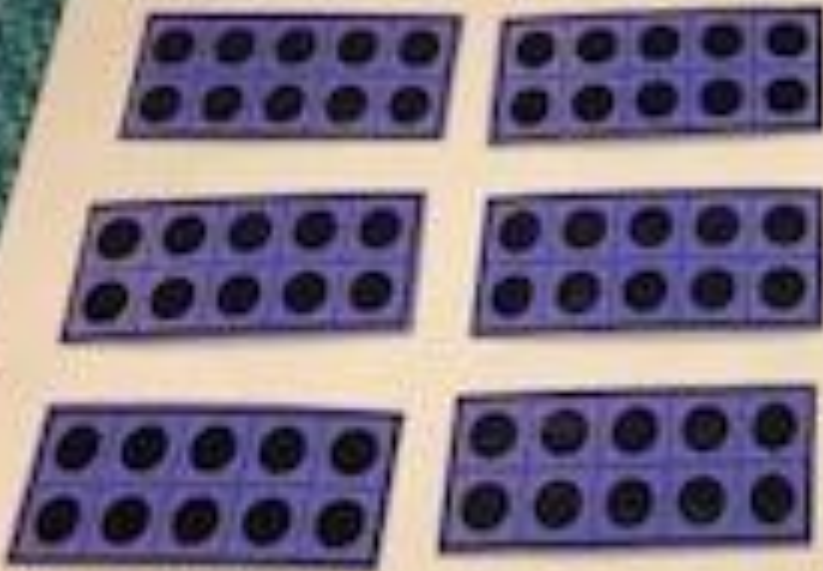
74

$$65 + 9 \text{ (using ten frames)}$$

$$65 + 9$$

Tens

Ones



# Branching (Tens and Ones)

This is an algorithm based on place value that decomposes numbers by using place value.

# 65 + 9

**Step 1:**

$60 + 5 + 9$  (break apart into tens and ones)

**Step 2:** (add the ones together)

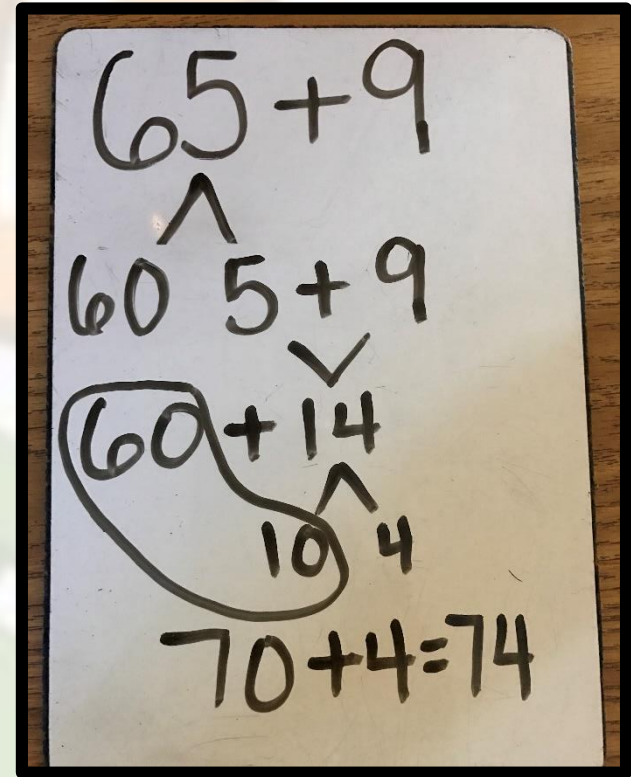
$$60 + 14$$

**Step 3:**

$60 + 10 + 4$  (break apart into tens and ones)

**Step 4:** (add the tens together)

$70 + 4 = 74$  (add the tens and the ones together to get the sum)





# Making Tens

$$65 + 9$$

Step 1: decompose 65 into  
 $64 + 1$

Step 2: add  
 $1 + 9 = 10$

Step 3: add  
 $64 + 10 = 74$

Handwritten diagram illustrating the 'Making Tens' strategy for  $65 + 9$ . The number 65 is written at the top, with a bracket underneath it. The bracket is split into two parts: one part is labeled '64' and the other part is labeled '1'. To the right of the '1' is a plus sign and the number '9'. A large oval is drawn around the '1' and the '9', with the number '10' written inside it. Below this, the equation  $64 + 10 = 74$  is written.

# Double Digit Subtraction

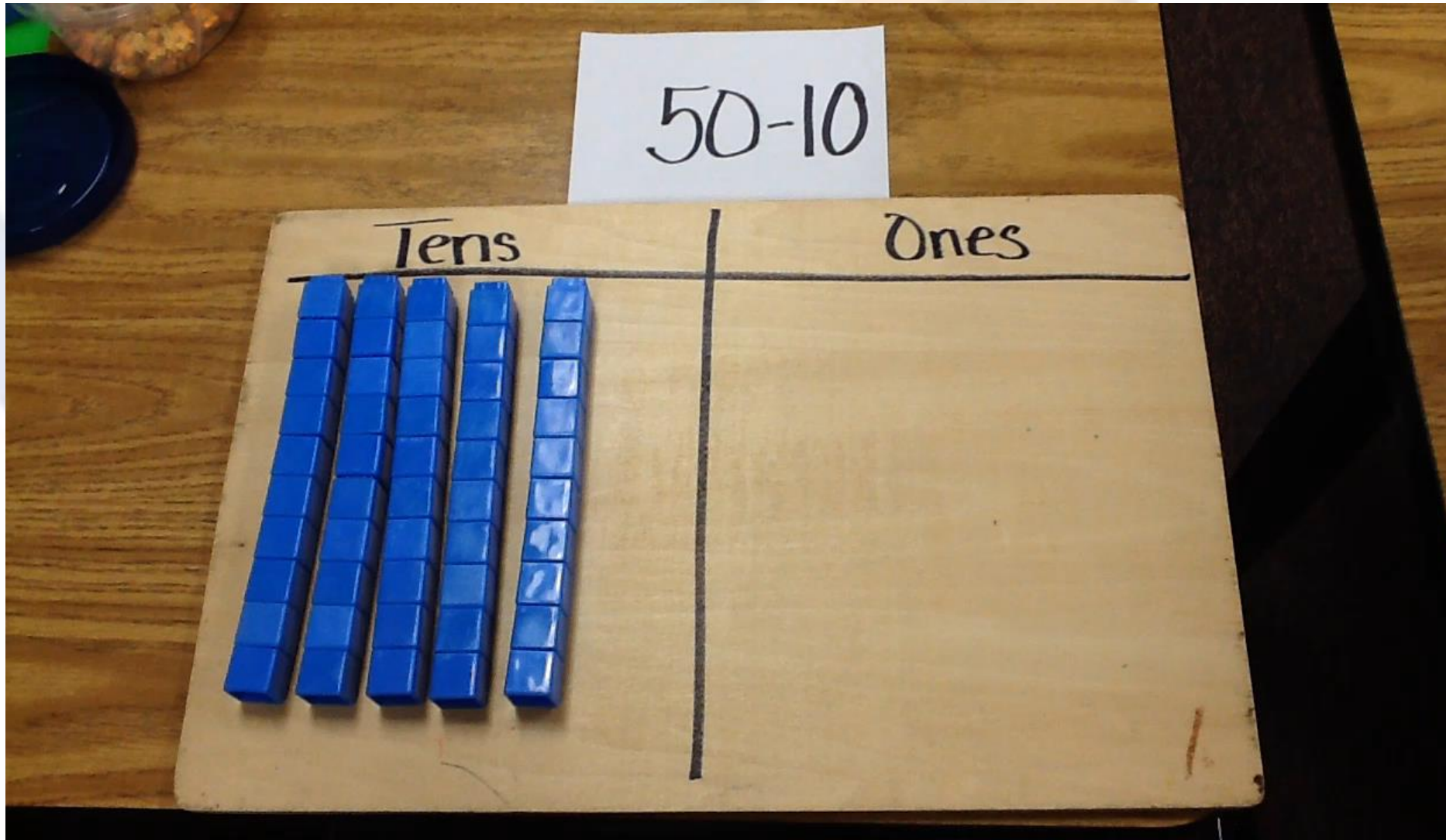
$$50 - 10$$

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Students will learn several different strategies to solve this problem:




1. Manipulatives
2. Ten frames
3. Quick Draw

$$50 - 10 \text{ (using manipulatives)}$$



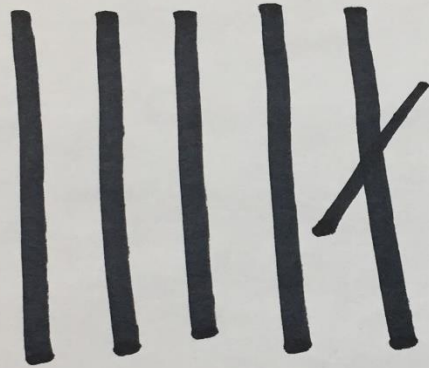
$$50 - 10 \text{ (using ten frames)}$$

50-10

Tens	Ones
	
	
	

The image shows a hands-on math activity on a wooden table. A piece of cardboard is divided into two columns by a vertical line. The left column is labeled 'Tens' and the right column is labeled 'Ones'. A small white paper with '50-10' written on it is placed above the cardboard. In the 'Tens' column, there are five ten frames, each containing 10 black dots, representing the number 50. The 'Ones' column is currently empty.

50 - 10 (using quick draw)



# Ways to explain your thinking and reasoning for double digit addition and subtraction



- ❖ manipulatives
- ❖ drawing
- ❖ written words
- ❖ orally

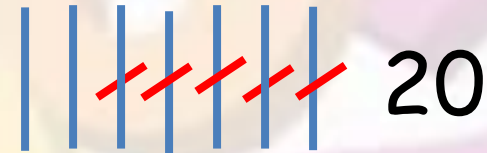
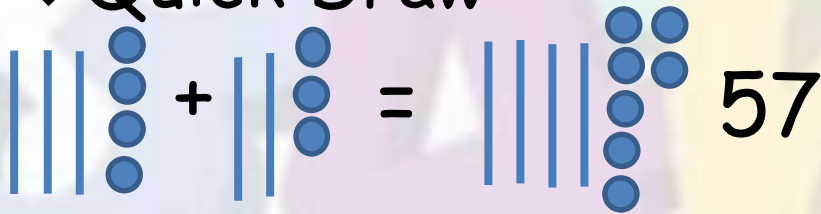
# Ways to show your thinking!

$$34 + 23 = \underline{\quad}$$

$$70 - 50 = \underline{\quad}$$

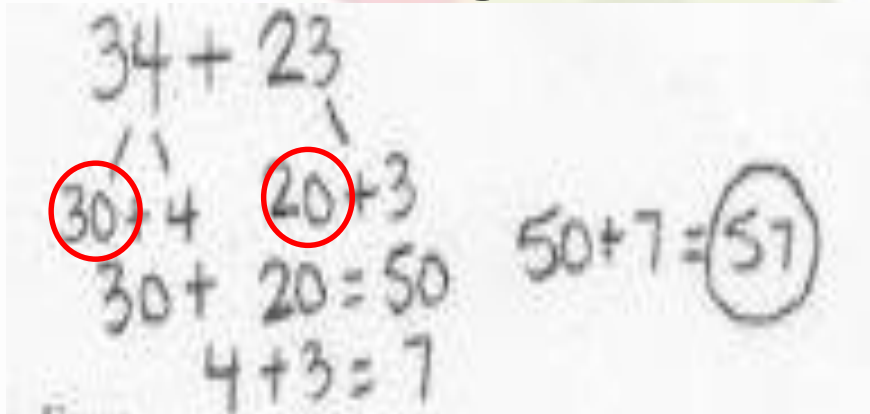
- Drawing

- ❖ Quick Draw



or

- ❖ Branching



7 tens - 5 tens = 2 tens

$$34 + 23 = \underline{\quad}$$

$$70 - 50 = \underline{\quad}$$

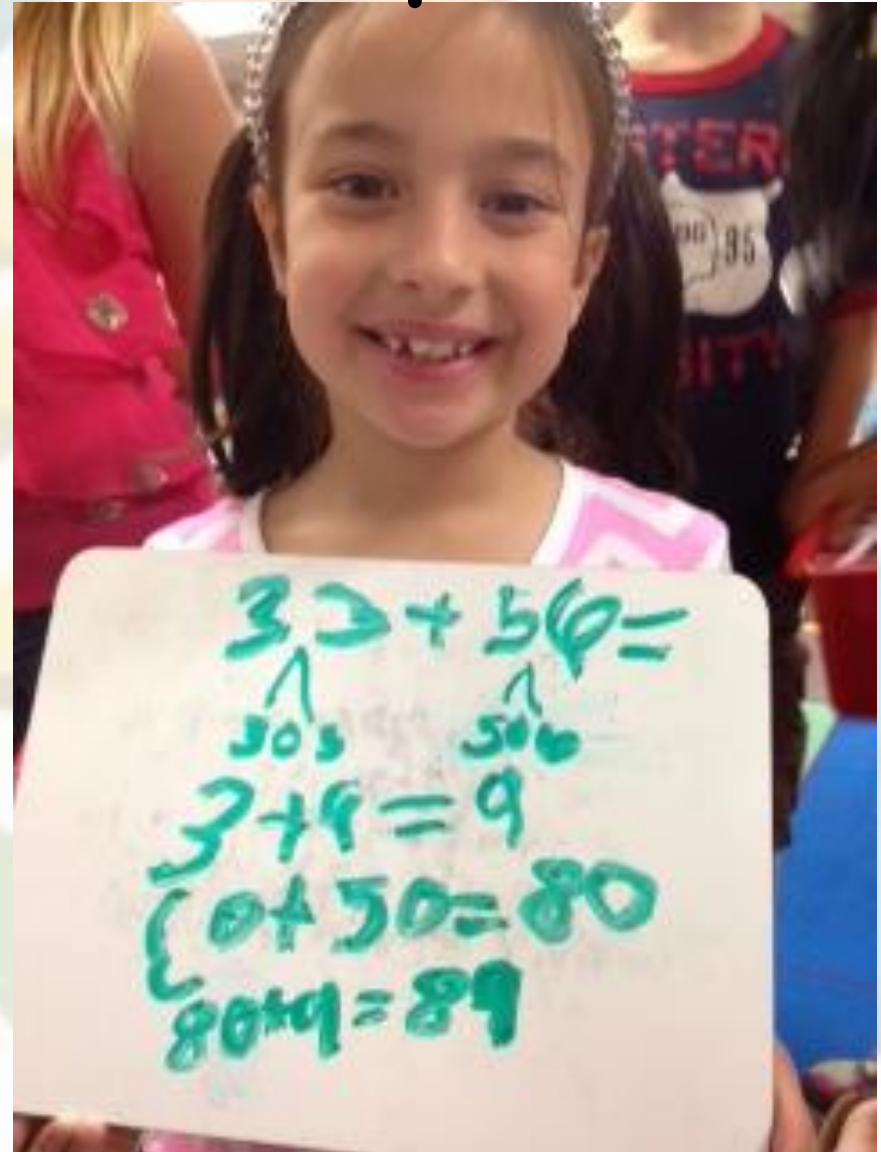
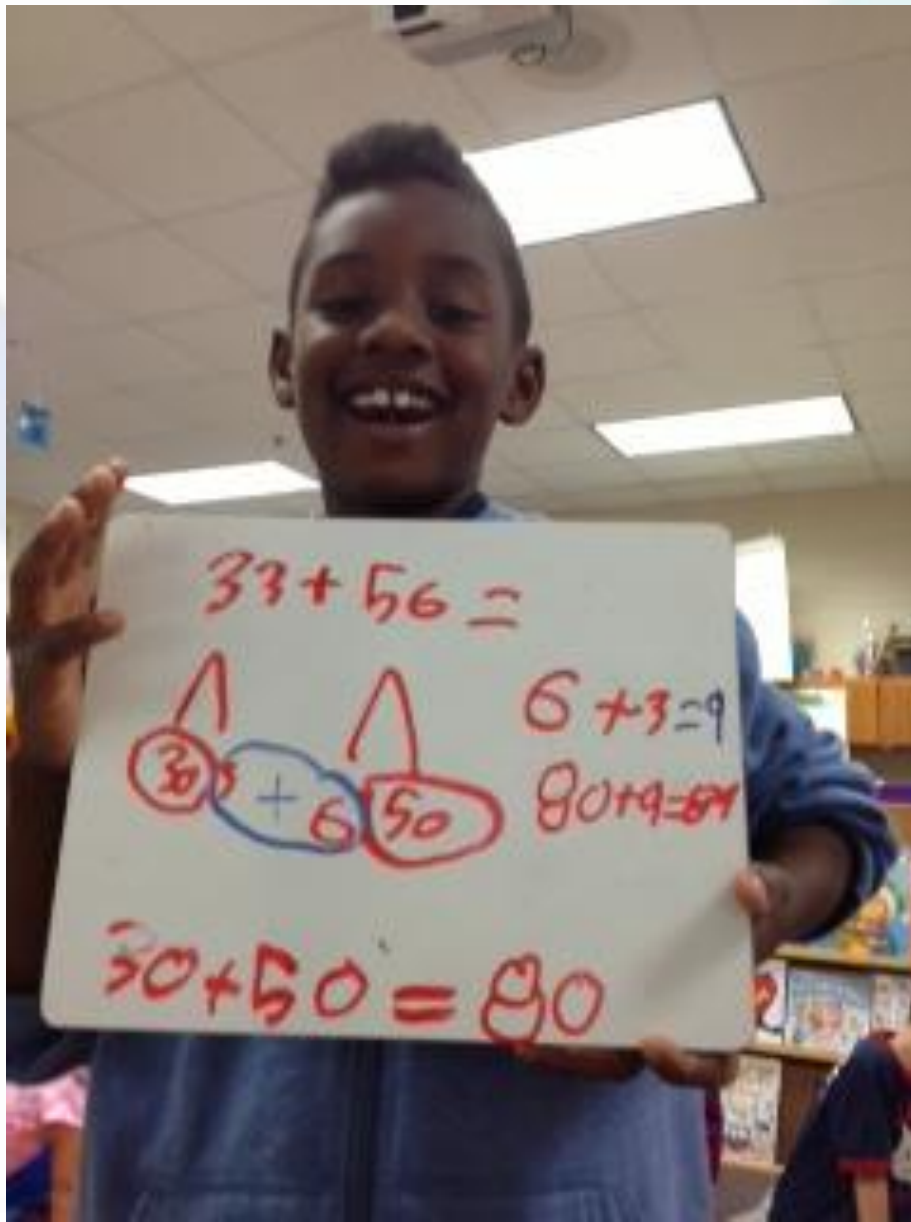
- **Written Words**

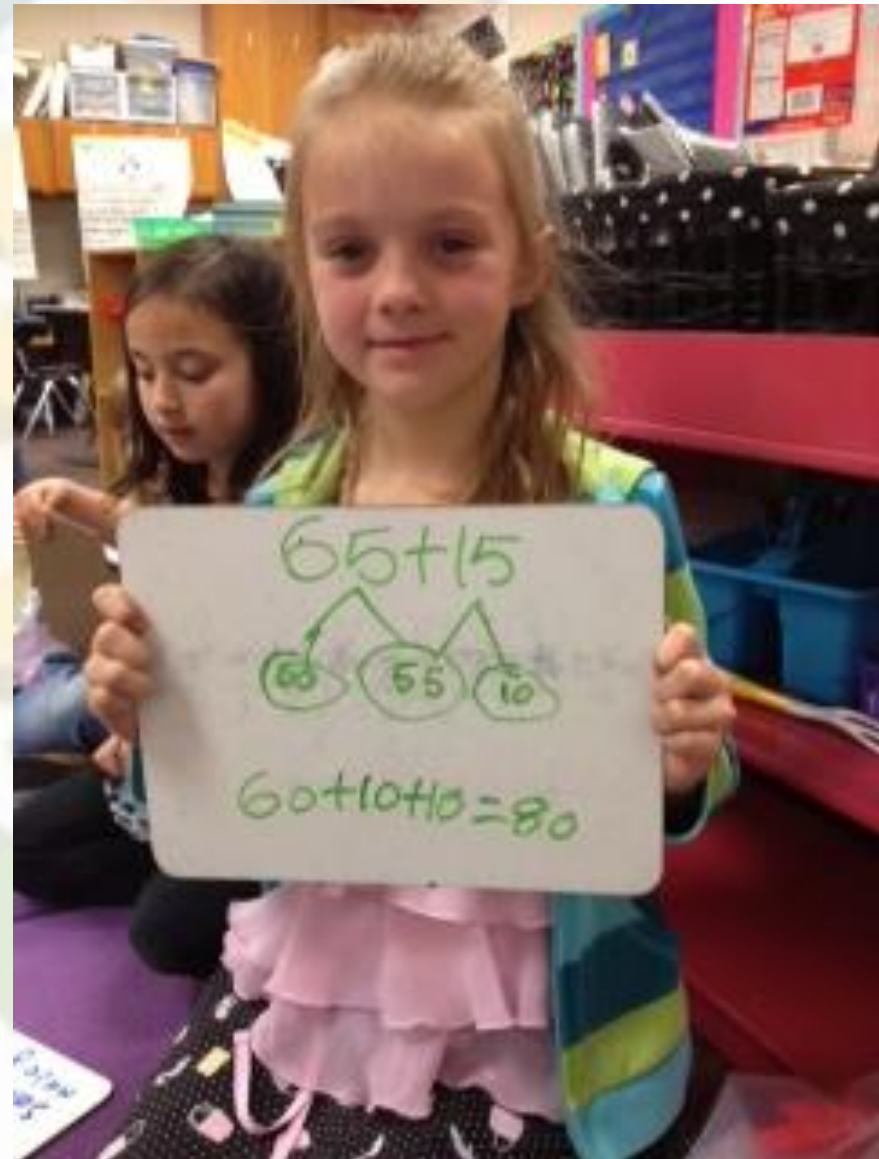
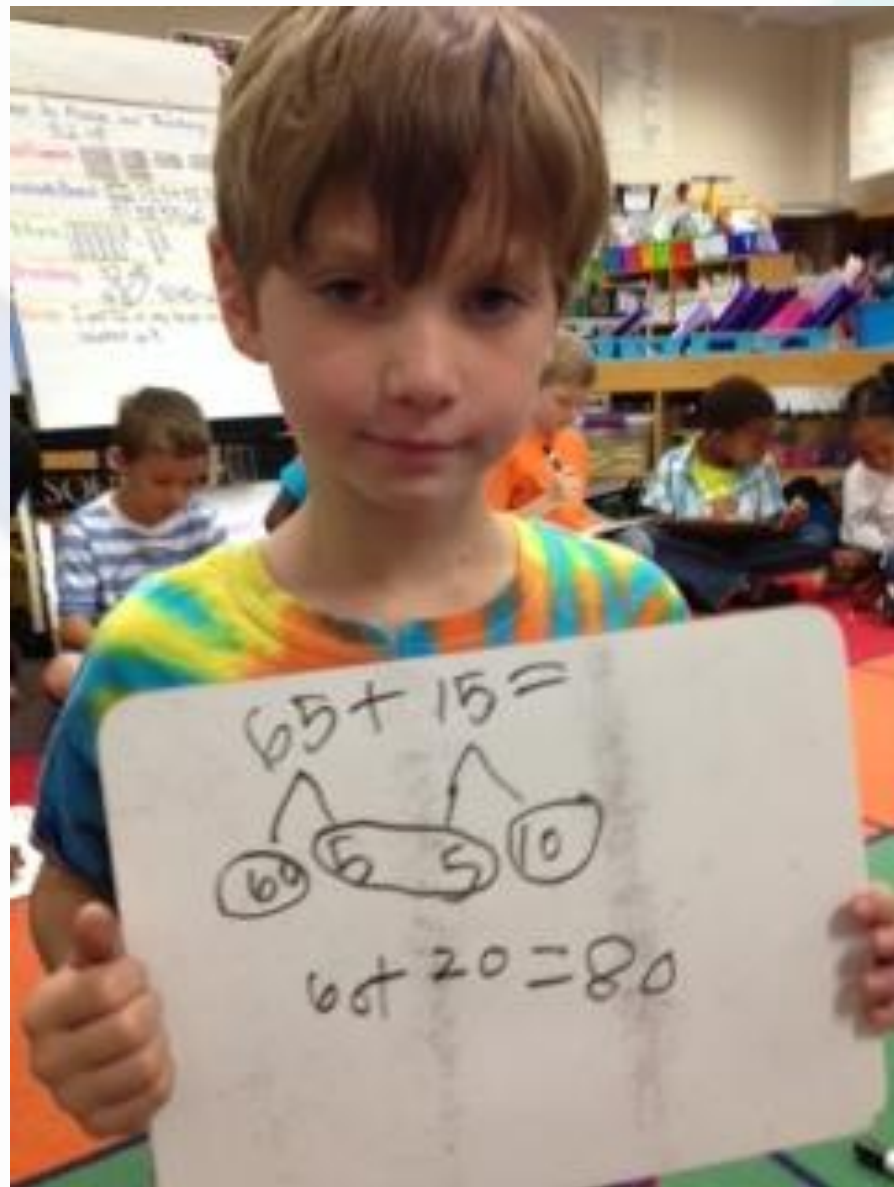
I know that there are 3 tens and 4 ones in 34 and 2 tens and 3 ones in 23. 3 tens plus 2 tens is 5 tens and 4 ones plus 3 ones is 7 ones, so 50 plus 7 is 57.

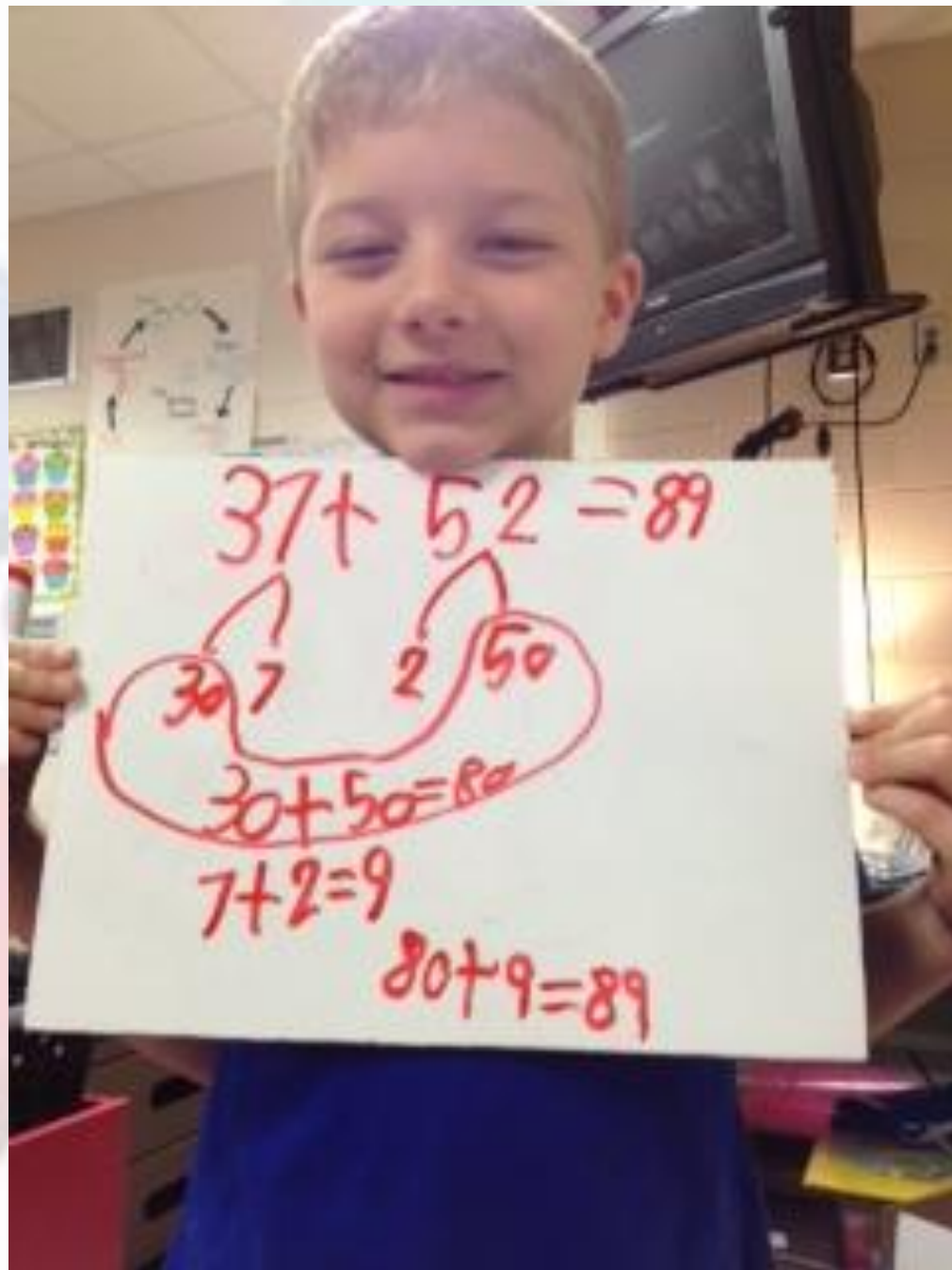
I know that 7 tens take away 2 tens is 5 tens or 50.



# Student Work Samples







$$37 + 52 = 89$$

$$\begin{array}{r} 307 \\ + 250 \\ \hline 557 \end{array}$$

$$30 + 50 = 80$$

$$7 + 2 = 9$$

$$80 + 9 = 89$$