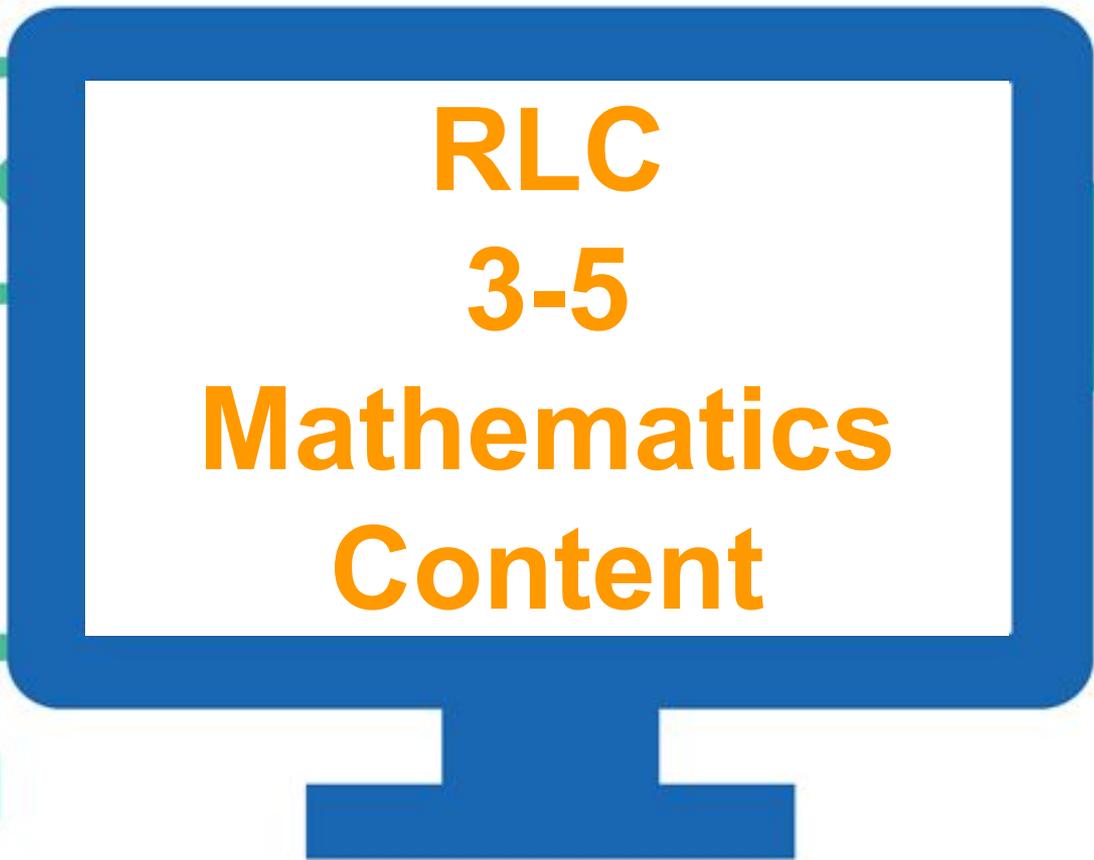
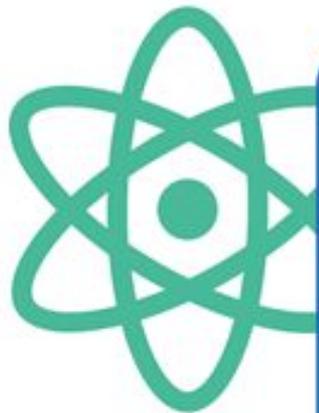


# RLC

**Remote Learning Chats**

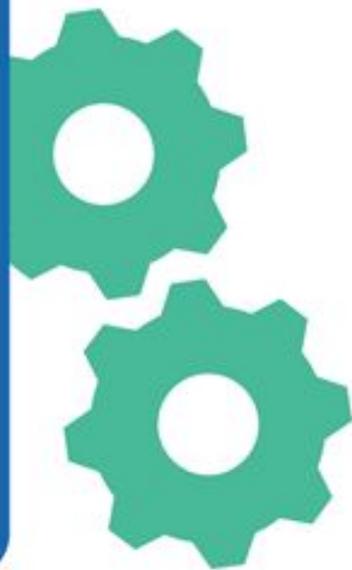




**RLC**

**3-5**

**Mathematics  
Content**



# Presenters:

Heather Jones is a 5th Grade Teacher at Unity Grove Elementary in Henry County.

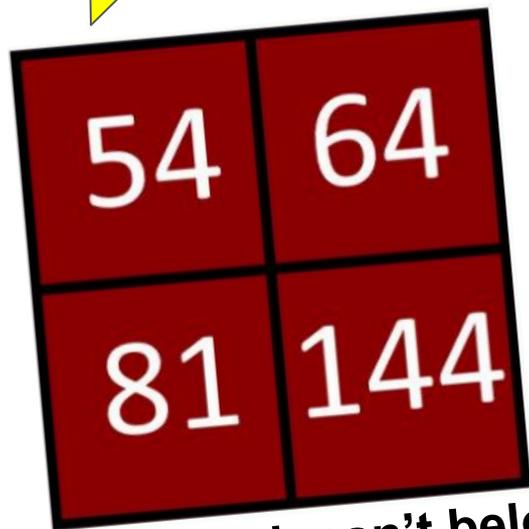
She is a PAEMST contender this year

She just earned her Specialist Degree from UGA in K-8 Mathematics



# Mathematics Routines

3rd  
Grade



Which one doesn't belong?

## Number Talks

$$53 + 28$$

$$44 + 18$$

$$36 + 38$$

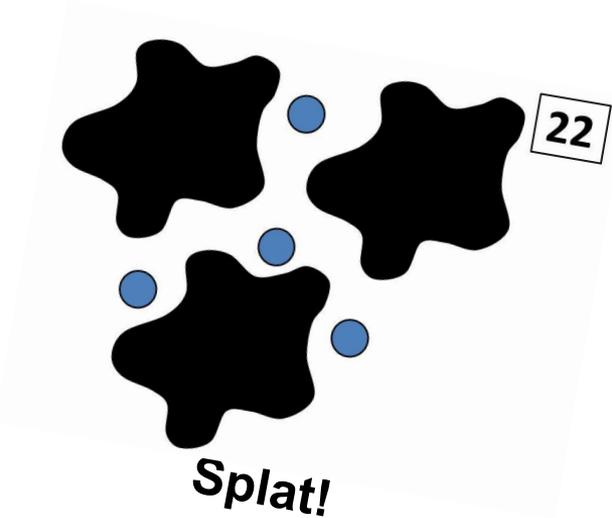
$$17 + 55$$

About how many almonds in the cup?



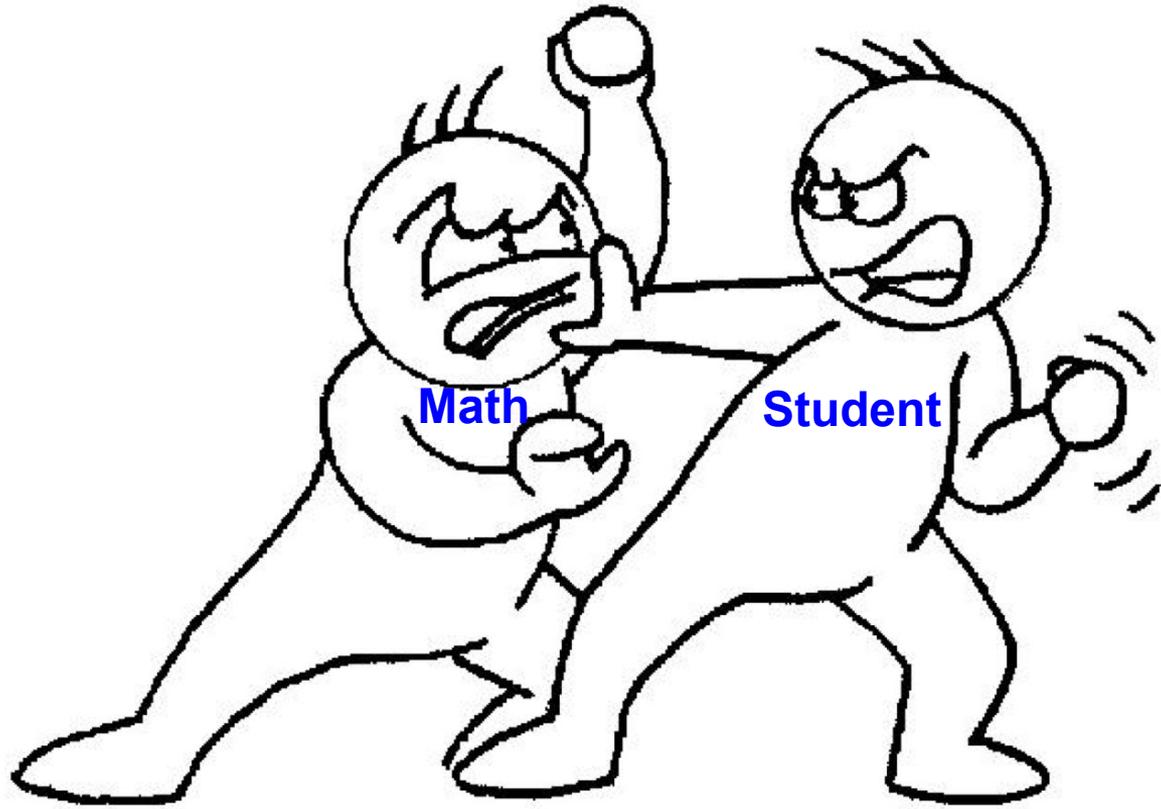
ESTIMATION180.com  
Access the [Teacher Resources page](#)

**Estimation 180**



3rd  
Grade

# Relationships



3rd  
Grade

# Relationships

## Piggy Bank



3rd  
Grade

# Relationships

## Candy Bowl Revisited



# How Do You Know Where Your Students Are?

3rd  
Grade



GEORGIA  
NUMERACY PROJECT

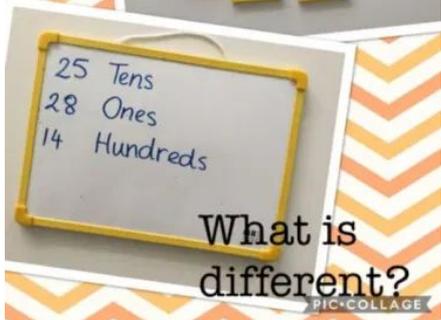
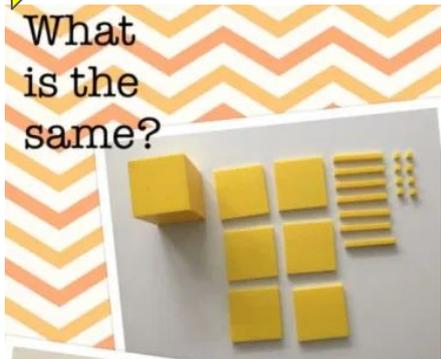
## Context-Based Task

FAL/Frameworks Tasks

# Mathematics Routines

4th  
Grade

What  
is the  
same?



What is  
different?

Same/Different Math

## Number Talks

$$2 \times 3 \times 3 \times 3$$

$$3 \times 6 \times 3$$

$$9 \times 3 \times 2$$

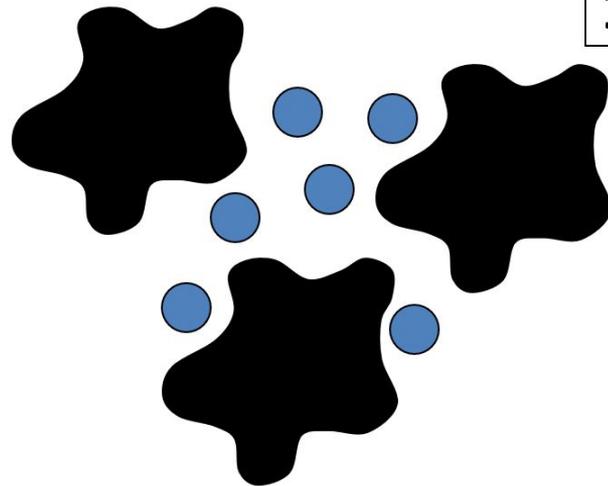
$$6 \times 9$$



ESTIMATION180.com

Estimation 180

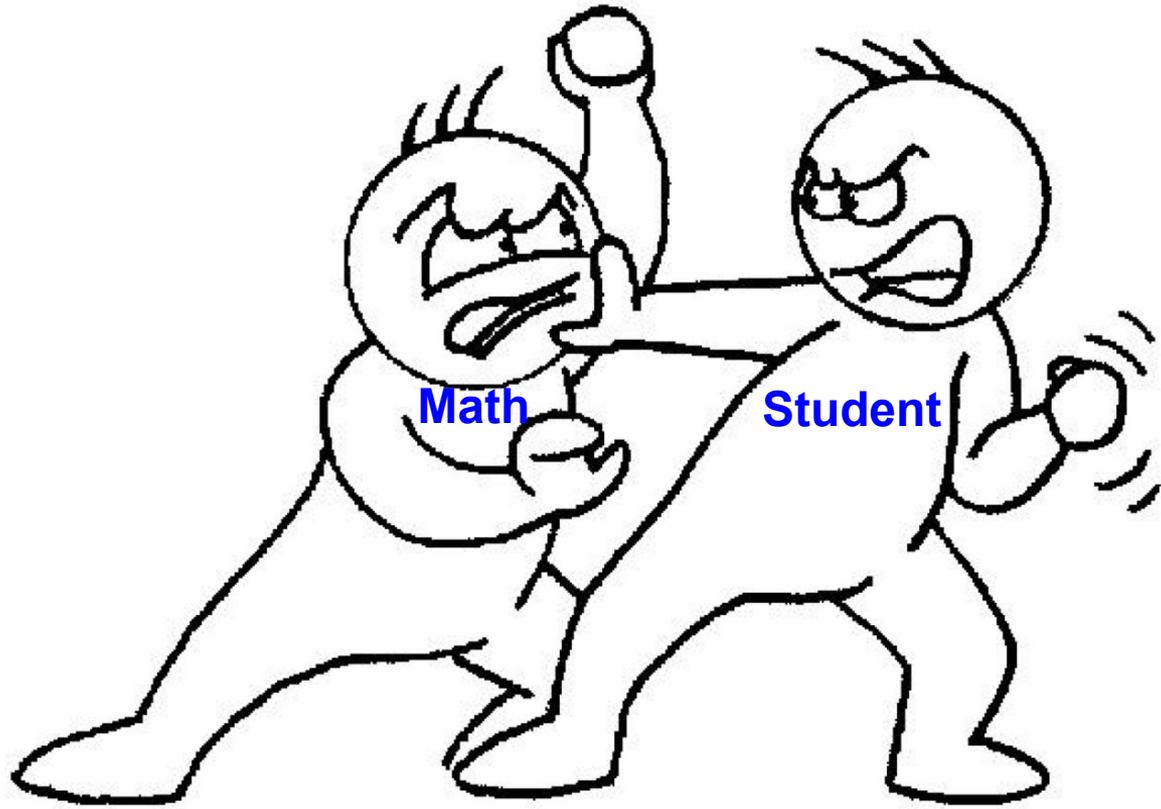
18



Splat!

3rd  
Grade

# Relationships





# Relationships

## NFL Salaries

2014 Base Salaries for the Atlanta Falcons



4th  
Grade

# Relationships

## Piggy Bank



# How Do You Know Where Your Students Are?

4th  
Grade



GEORGIA  
NUMERACY PROJECT

## Context-Based Task

FAL/Frameworks Tasks



# Learning Styles Inventory





# Number Talks

## Ten Frames

●	●
●	●
●	●
●	●
●	●
●	●
●	●
●	●
●	●
●	●

$2 \times 8 + 3$   
 $10 + 9$   
 $2 \times 10 - 1$   
 $3 \times 5 + 4$   
 $4 \times 5 - 1$   
 $9 \times 2 + 1$   
 $10 \times 2 - 1$   
 $(3 \times 3) + 1 + (3 \times 3)$   
 $20 - 1$   
 $2 \times 5 + 9$   
 $4 \times 4 + 3$   
 $5 \times 4 - 1$

18

$4 + 2(n)$   
 $4 + 2(7) = 18$   
 $4 + 2(1 + 3 \times 2) = 18$

Steve Wybor

**Splat!**

5th  
Grade

## 3-Act Tasks

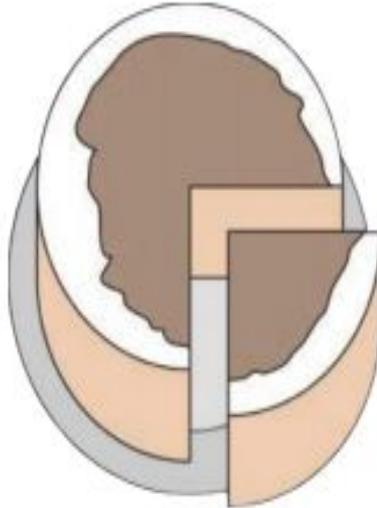
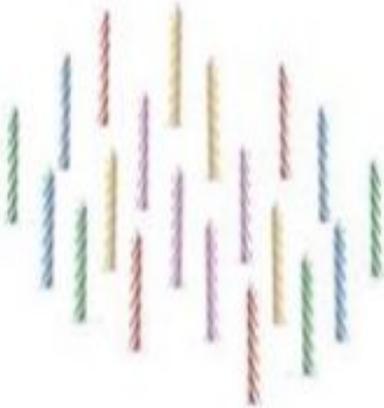




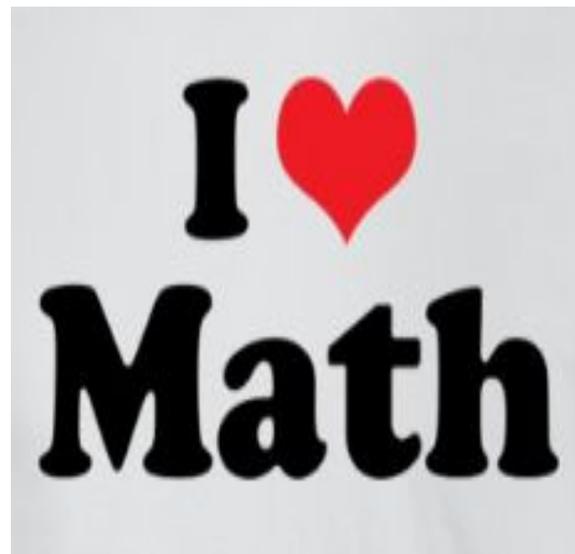
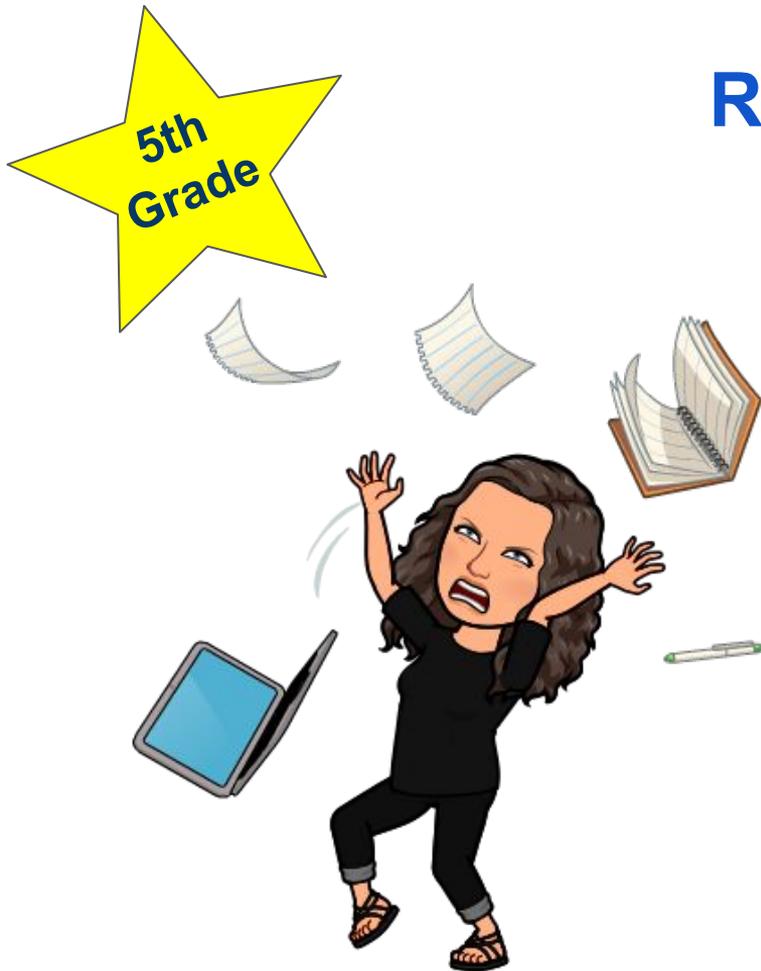
# What are my students good at?



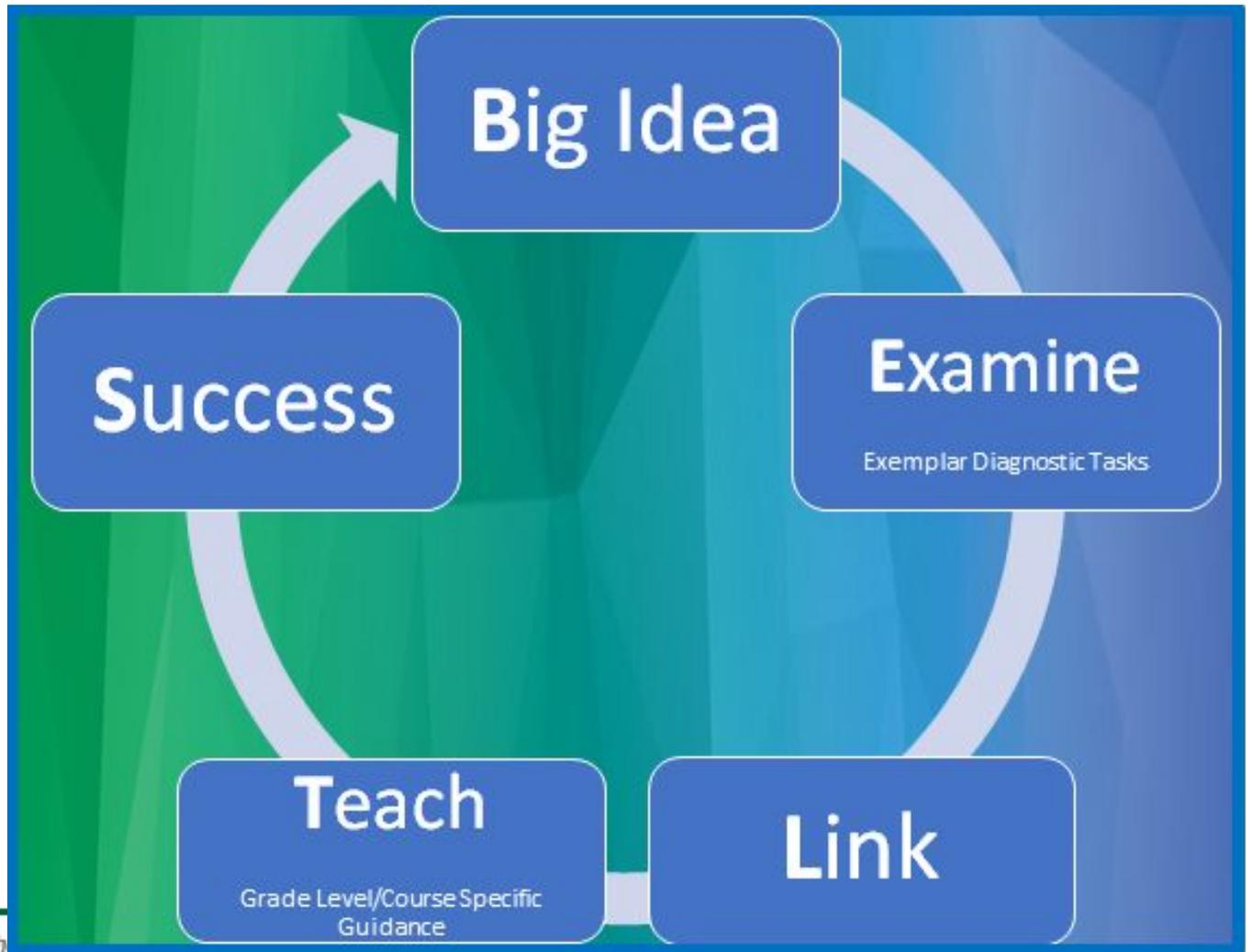
**GEORGIA  
NUMERACY PROJECT**



# Relationships



# Student Success Toolkit



# Student Success Toolkit



<b>Big Idea/ Topic</b>	Build Fluency with Addition and Subtraction
<b>Standard Alignment</b>	<p><i>MGSE3.NBT.1 Use place value understanding to round whole numbers to the nearest 10 or 100.</i></p> <p><i>MGSE3.NBT.2 Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.</i></p> <p><i>MGSE3.MD.3 Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs. For example, draw a bar graph in which each square in the bar graph might represent 5 pets.</i></p> <p><i>MGSE3.MD.4 Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units – whole numbers, halves, or quarters.</i></p>

# Student Success Toolkit



**Diagnostic  
Assessment**

[Diagnostic Mathematics Exemplar Tasks](#)

***Sample Mathematics Learning Plan***

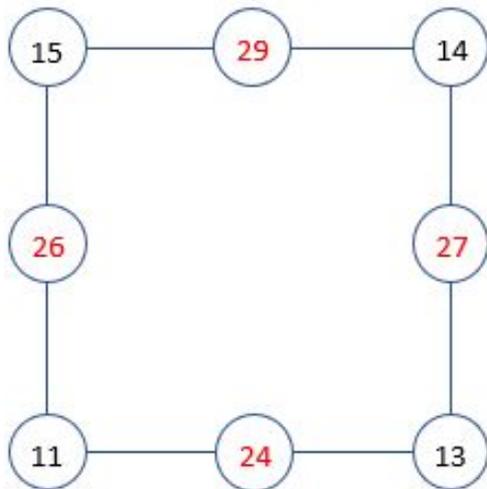


# Student Success Toolkit

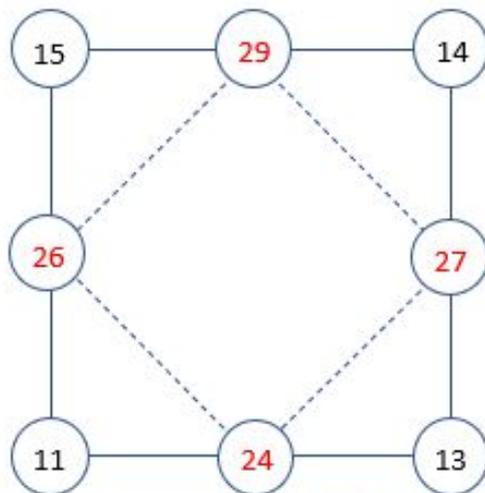
## Number Squares Sums

A third-grade student was doodling with squares and discovered this interesting puzzle. She started by putting 4 numbers in the corners of a square.

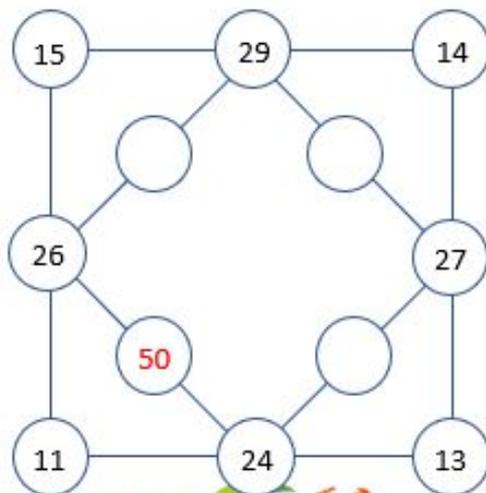
Next, she added two numbers connected by a side and placed the sum in the middle of that side.



She then connected the new circles to create a new square.



She continued finding the sums of the corners and placing them in the center of each side as shown below.



Adaped from [Number Squares, nrichmaths.org](http://NumberSquares.nrichmaths.org)

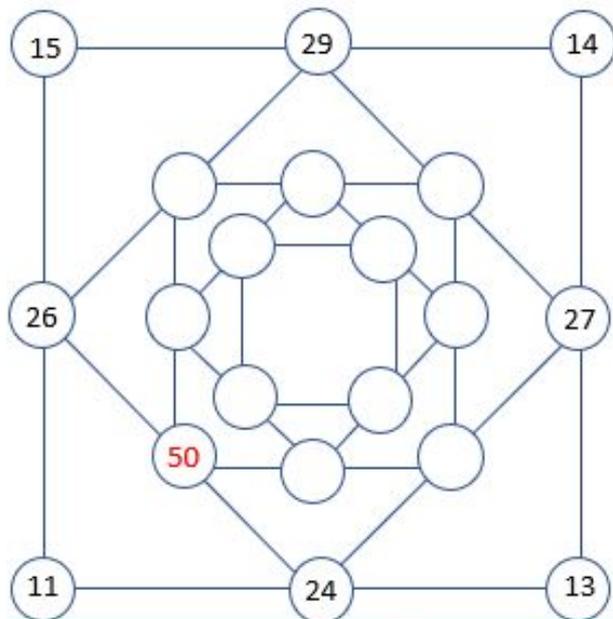
Richard Woods, Georgia's School Superintendent | Georgia Department of Education | Educating Georgia's Future



# Student Success

## Number Squares Sums Toolkit

Her puzzle looked so neat, but she didn't have time to finish before leaving for home.



What do you think the size of the numbers in the inner-most square will be? Estimate. Check to see how close your estimate was. What do you notice about the numbers?

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# Number Squares Sums – Anticipating Student Thinking

Anticipated Student Thinking	Students and Their Thinking	Big Idea
<p><b>Use Strategies Based on Place Value and Properties of Operations</b> Students use efficient, flexible, strategies to find accurate sums.</p>		3 <sup>rd</sup> grade: Build Fluency with Addition and Subtraction
<p><b>Use Diagrams to Support Computational Understanding</b> Students use base-ten diagrams to aid their computation and connect these diagrams to equations.</p>		3 <sup>rd</sup> grade: Build Fluency with Addition and Subtraction
<p><b>Use Diagrams in Isolation for Computation</b> Students correctly use diagrams for computation with no equations connected to these diagrams.</p>		3 <sup>rd</sup> grade: Build Fluency with Addition and Subtraction

# Number Squares Sums – Anticipating Student Thinking

Anticipated Student Thinking	Students and Their Thinking	Big Idea
<p><b>More than One Strategy</b> Students use more than one strategy as they work through the problem, showing flexibility with number across multiple problems.</p>		3 <sup>rd</sup> grade: Build Fluency with Addition and Subtraction
<p><b>Use Digit-Based Algorithms</b> Students use digit-based algorithms and show little understanding of addition/subtraction.</p>		3 <sup>rd</sup> grade: Build Fluency with Addition and Subtraction
<p><b>Identify Patterns Within and/or Between Squares</b> Students can find at least one pattern or interesting fact regarding the numbers in the Number Squares Sums puzzle.</p>		3 <sup>rd</sup> grade: Build Fluency with Addition and Subtraction

## Instructional Design

### Engage

**Addition [Number Talks](#)** Display the addition problem on the board and allow students time to think of how to solve it in more than one way. Step by step instructions for completing a Number Talk can be found at the link.

- **Synchronous** Complete during a classroom discussion or virtual classroom meeting.
- **Asynchronous** Introduce the problem to students in a virtual platform; this can be done via e-document or video. Allow students to share responses and provide feedback to their peers within the virtual platform/classroom. Provide feedback to individual student responses and highlight multiple strategies used by students.
- **Unplugged/ Offline** Encourage students to provide a written explanation of their thinking and how they reached their solution when solving problems. Provide feedback that demonstrates different strategies to solve problems. Alternatively, share a problem along with a strategy and solution; ask students to explain a different way to solve the problem.

## Instructional Design

### Explore

["Piggy Bank"](#) 3-Act Task- Early addition and subtraction with part-part-whole models.

- **Synchronous** Complete during a classroom discussion or virtual classroom meeting.
- **Asynchronous** Pre Record each act or create an e-document for each act. Allow students to share their thinking within the virtual platform/classroom. When students are asked to share their solutions and strategies in act 3, ask them to illustrate with drawings or write an equation to match. Showcase different strategies students used and allow them to respond/give feedback within the virtual platform.
- **Unplugged/ Offline** Provide students with information from Act 2 and provide them with the main question "how much money is in the piggy bank?" Ask students to answer the question and provide an equation and/or drawing that demonstrates how they solved the problem.

## Instructional Design

### Apply

[Make a Paper Mosaic!](#) - In this task, students will create paper mosaic art. Each color square represents a different number (to be assigned by adult)

- **Synchronous** Complete during a classroom discussion or virtual classroom meeting.
- **Asynchronous** Pre Record directions for using the design process in the completion of paper mosaics or create an e-document. Students will use a design process in creating mosaics, such as ASK - IMAGINE - PLAN - CREATE - IMPROVE - SHARE. Students will share total sums of colored squares used in creating mosaics.
- **Unplugged/ Offline** Students will record their design process and complete a paper mosaic.

## Instructional Design

### Reflect

***Would You Rather?*** In this task, students must use mathematical reasoning to decide how many jellybeans they would rather give to a friend.

- **Synchronous** Complete during a classroom discussion or virtual classroom meeting.
- **Asynchronous** Introduce the problem to students in a virtual platform; this can be done via e-document or video. Allow students to share responses and provide feedback to their peers within the virtual platform/classroom. Provide feedback to individual student responses and highlight multiple strategies used by students.
- **Unplugged/ Offline** Encourage students to provide a written explanation of their thinking and how they reached their solution when solving problems. Provide feedback that demonstrates different strategies to solve problems. Alternatively, share a problem along with a strategy and solution; ask students to explain a different way to solve the problem.

# Student Success Toolkit

## Success

- [Piggy Bank](#) - 3- Act Task Formative Assessment Questions

- What models did you create?
- What organizational strategies did you use?

[Diagnostic Mathematics Exemplar Tasks](#)

## Suggestions for Acceleration and Intervention, as needed

- [Race to One Hundred](#) This game provides students an opportunity to practice addition, subtraction, multiplication, and division as they try to reach 100 on a number chart.
  - o **Intervention** - Students who need additional support/practice with addition and subtraction can play this game using one operation at a time to strengthen their knowledge.
  - o **Acceleration**- Students who have mastered addition and subtraction can be challenged by adding multiplication and division.

## At Home Support

### [Dice Addition and subtraction games](#)

This resource contains four different games that can be played with dice to review addition and subtraction at home.

### [RoboGarden STEAM \(Online\)](#)

Student practices counting, addition and subtraction while solving some coding challenges

### [Zearn](#)

Independent digital addition and subtraction lessons.

### [Khan Academy](#)

Addition, subtraction, and estimation

# Mathematics Resources

Introduction		
Kindergarten	1st Grade	2nd Grade
3rd Grade	4th Grade	5th Grade
6th Grade	7th Grade	8th Grade
Coordinate Algebra	Algebra I	Analytic Geometry
Geometry	Algebra II - Advanced Algebra	Precalculus
Calculus-Based HS Courses		All Other HS Courses
Additional Teacher Resources		

<https://www.gadoe.org/Curriculum-Instruction-and-Assessment/Curriculum-and-Instruction/Documents/Mathematics/GADOE-Remote-Learning-Supplemental-Resources-for-Mathematics-K-12.pdf>

# Questions?



# Contact Us

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