

PARENT INTRODUCTION TO EUREKA MATH

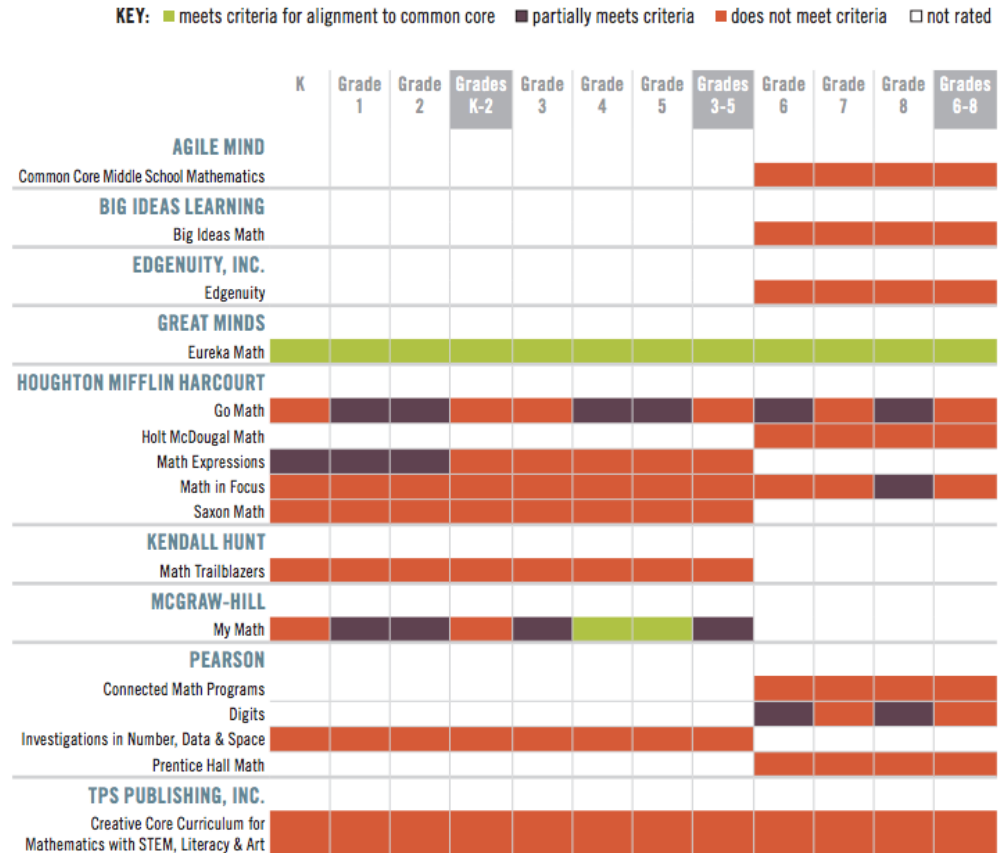
Grand Ridge Elementary - November 14, 2016

Agenda

- Welcome
- Why Eureka?
- Anatomy of a Eureka Lesson
- Common Eureka Strategies
- What to Expect at Home
- How to Help your Mathematician

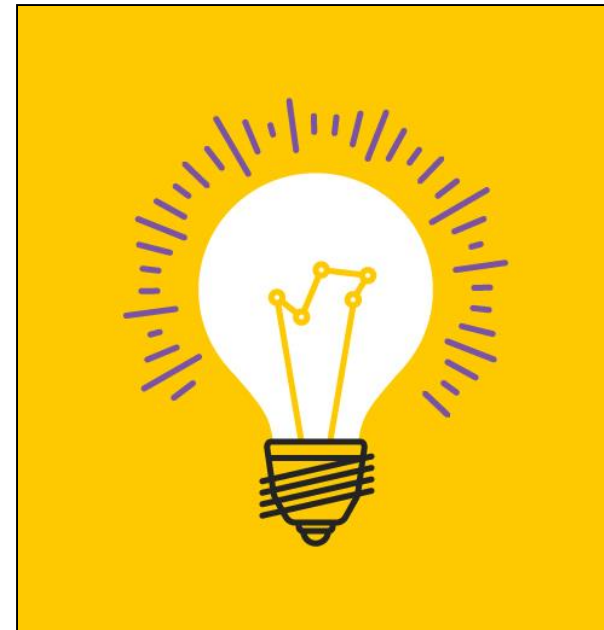
Why Eureka?

- Everyday Math fell **out of alignment** when WA adopted new standards.
- Eureka is:
 - ▣ **fully aligned** with standards
 - ▣ a proven track record in boosting student achievement in math.



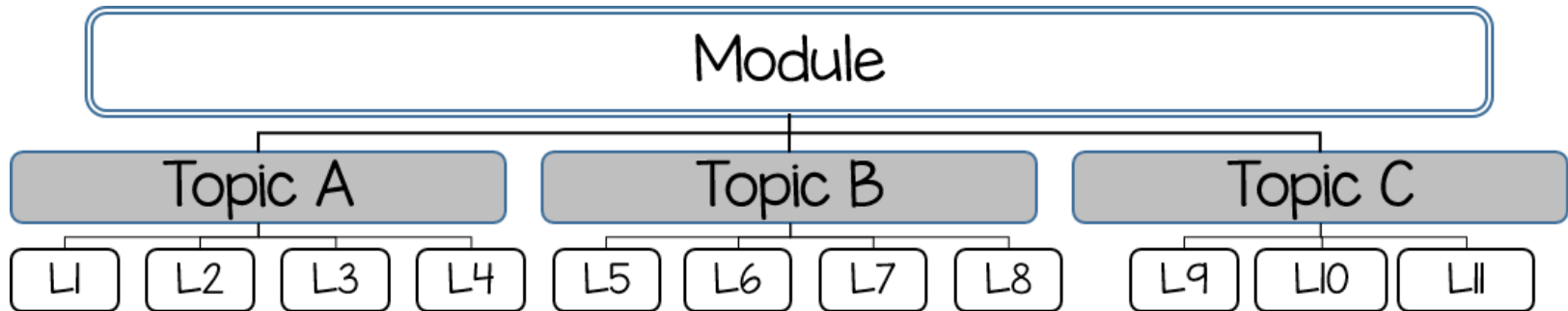
Why is Eureka so Different?

- The Eureka Math curriculum helps build **number sense** and **conceptual understanding**.
 - Past: Multiply and divide following a sequence of steps.
 - Eureka:
 - Think flexibly about numbers
 - Understand *why* the steps work
 - *When* to apply them
 - How to use *other strategies* when more efficient



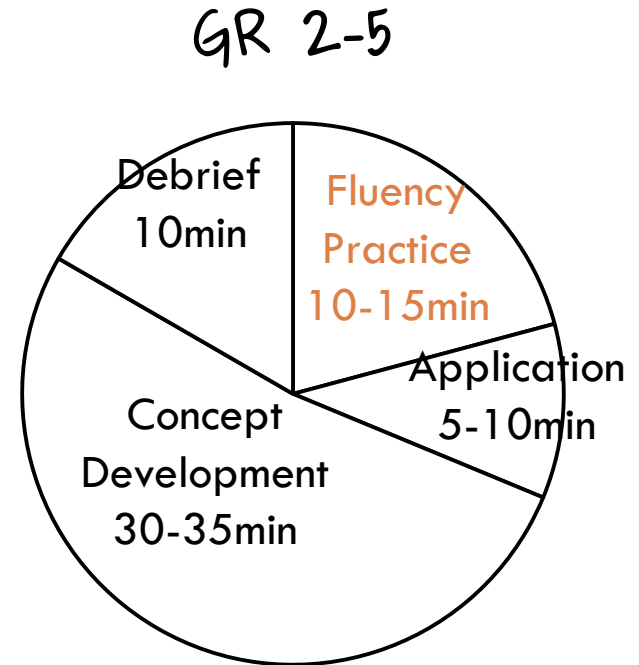
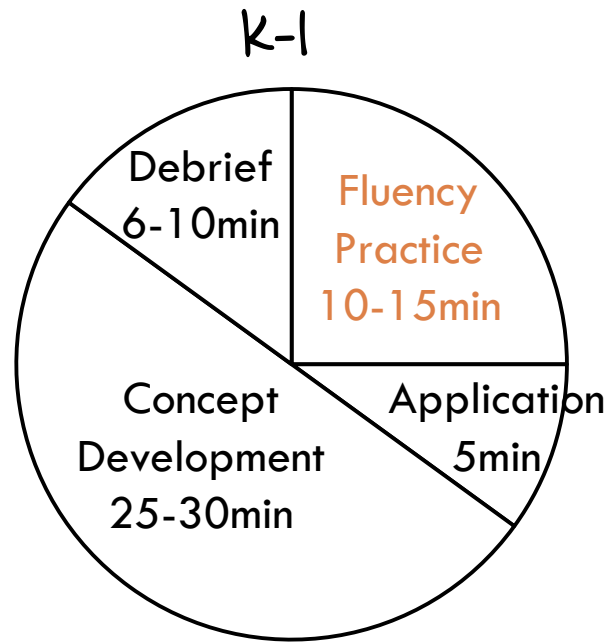
Click light bulb for video

Eureka Structure



- Lessons build upon one another within a topic.
- Topics build within a module.

Anatomy of a Eureka Lesson



Fluency Practice

Purpose: To develop automaticity with basic math facts.

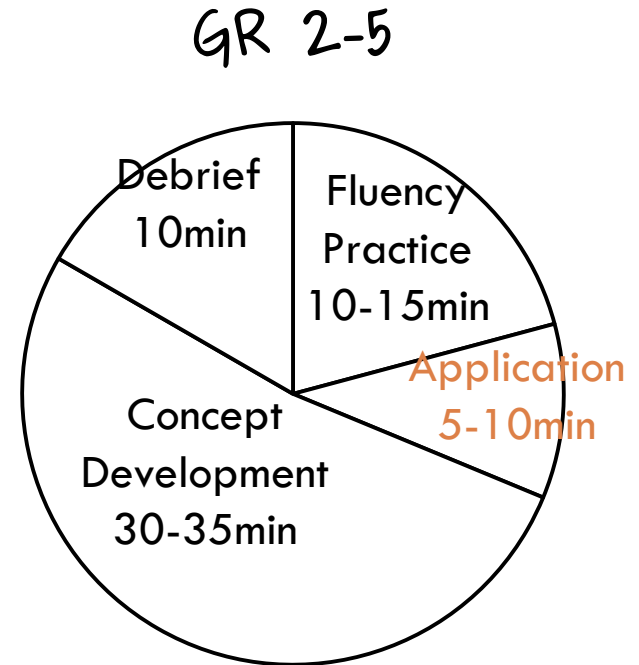
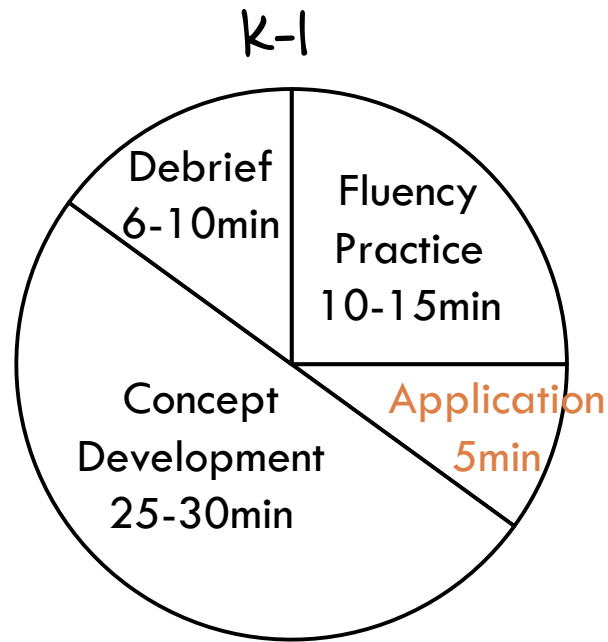
- Maintenance, preparation or anticipation of important skills
- Includes activities like sprints and happy/group counting.
- Highly engaging!

Counting and Fluency Every Day

- Counting to 20 the “Say Tens” Way
- Happy Counting/Group Counting
- Sprint

Subtraction		
1.	$3 - 1 =$	
2.	$13 - 1 =$	
3.	$23 - 1 =$	
4.	$53 - 1 =$	
5.	$4 - 2 =$	
6.	$14 - 2 =$	
7.	$24 - 2 =$	
8.	$64 - 2 =$	
9.	$4 - 3 =$	
10.	$14 - 3 =$	
11.	$24 - 3 =$	
12.	$74 - 3 =$	
13.	$6 - 4 =$	
14.	$16 - 4 =$	
15.	$26 - 4 =$	
16.	$96 - 4 =$	
17.	$7 - 5 =$	
18.	$17 - 5 =$	
19.	$27 - 5 =$	
20.	$47 - 5 =$	
21.	$43 - 3 =$	
22.	$87 - 7 =$	
23.	$8 - 7 =$	
24.	$18 - 7 =$	
25.	$58 - 7 =$	
26.	$62 - 2 =$	
27.	$9 - 8 =$	
28.	$19 - 8 =$	
29.	$29 - 8 =$	
30.	$69 - 8 =$	
31.	$7 - 3 =$	
32.	$17 - 3 =$	
33.	$77 - 3 =$	
34.	$59 - 9 =$	
35.	$9 - 7 =$	
36.	$19 - 7 =$	
37.	$89 - 7 =$	
38.	$99 - 5 =$	
39.	$78 - 6 =$	
40.	$58 - 5 =$	
41.	$39 - 7 =$	
42.	$28 - 6 =$	
43.	$49 - 4 =$	
44.	$67 - 4 =$	

Anatomy of a Eureka Lesson

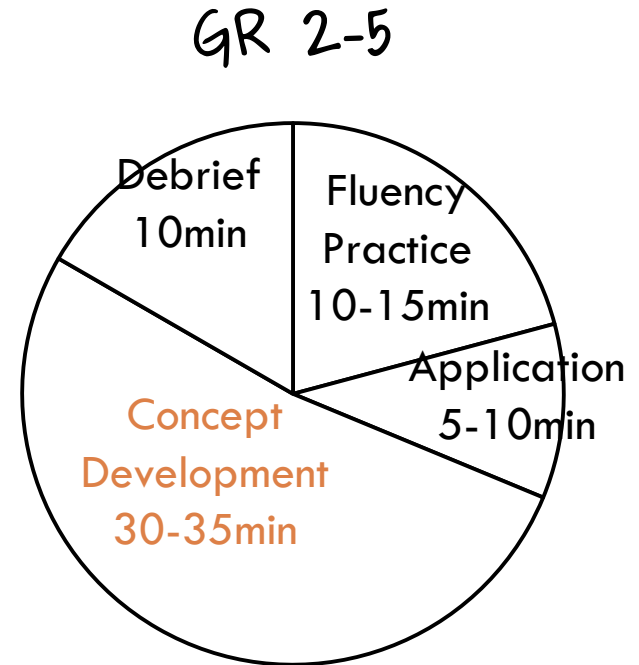
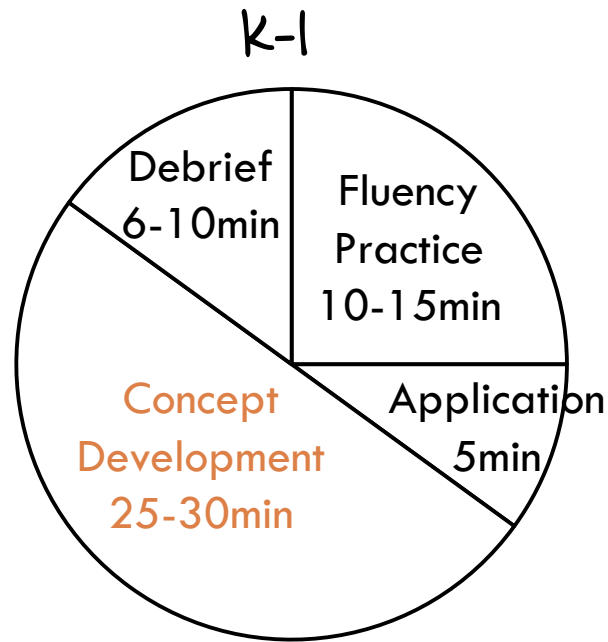


Application Problems

Purpose: To provide an opportunity to apply skills in new ways

- Authentic problem-solving, real world application
- Often a springboard to new learning

Anatomy of a Eureka Lesson

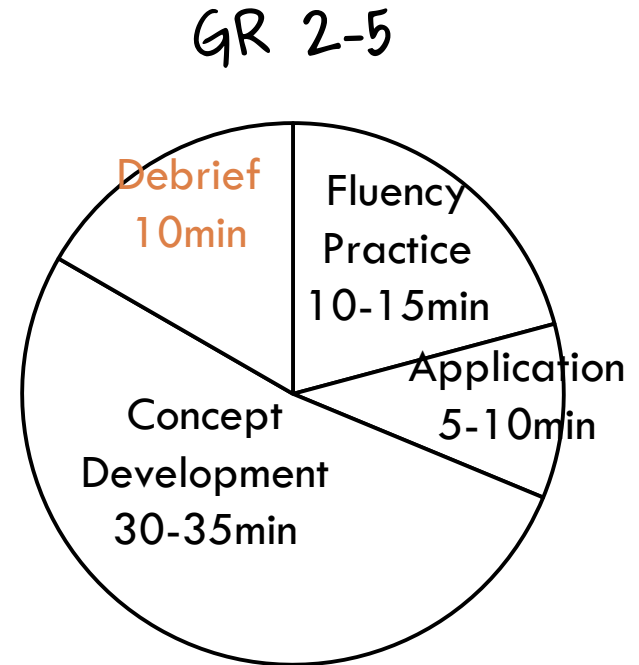
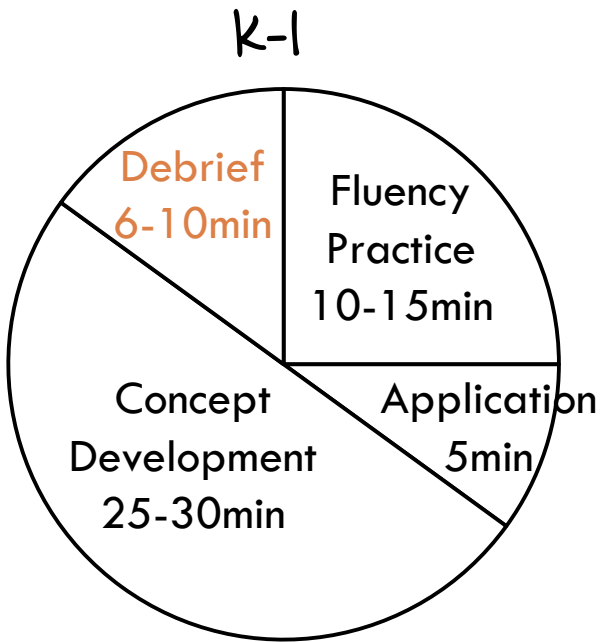


Concept Development

Purpose: Addresses the new content being studied

- Carefully sequenced problems with increasing complexity
- Gradual release of responsibility
- Includes 10 min of students working on Problem Set

Anatomy of a Eureka Lesson



Student Debrief

Purpose: Reflect on learning, clarify misconceptions

- Another teachable moment and opportunity to solidify new learning

Common Eureka Strategies

- RDW (Read, Draw, Write)
- 10-Frames
- Number Bonds
- Place Value Charts
- Tape Diagrams

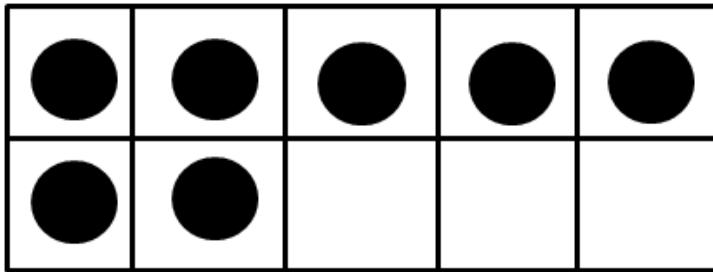
Common Eureka Strategies

- Read, Draw, Write
 1. Read.
 2. Draw and label.
 3. Write a number sentence.
 4. Write a word sentence (statement).

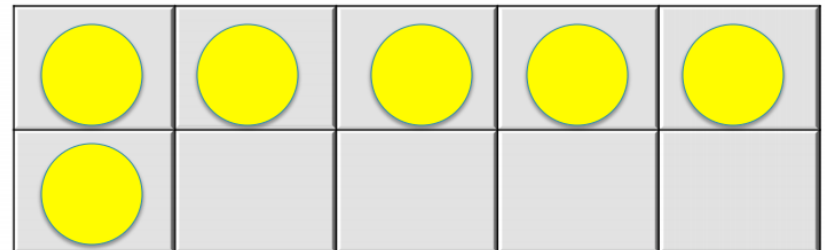
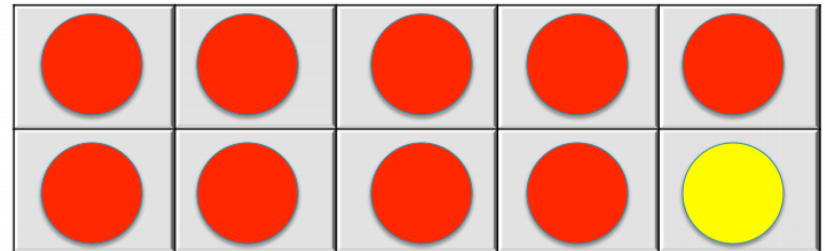
- ▣ What do I see?
- ▣ Can I draw something?
- ▣ What conclusions can I make from my drawing?

Common Eureka Strategies

- 10-Frames
 - ▣ Visual representation of numbers
 - ▣ Organized around the number 10

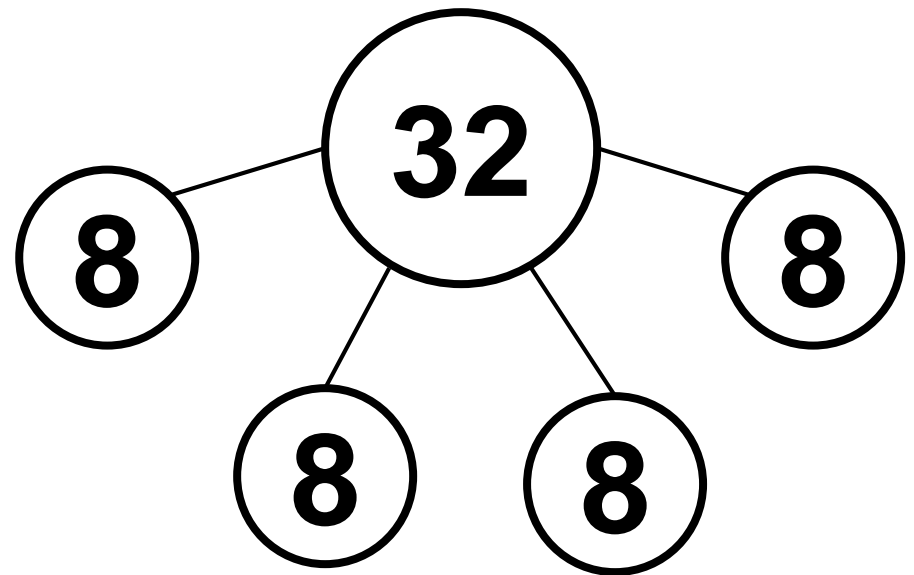
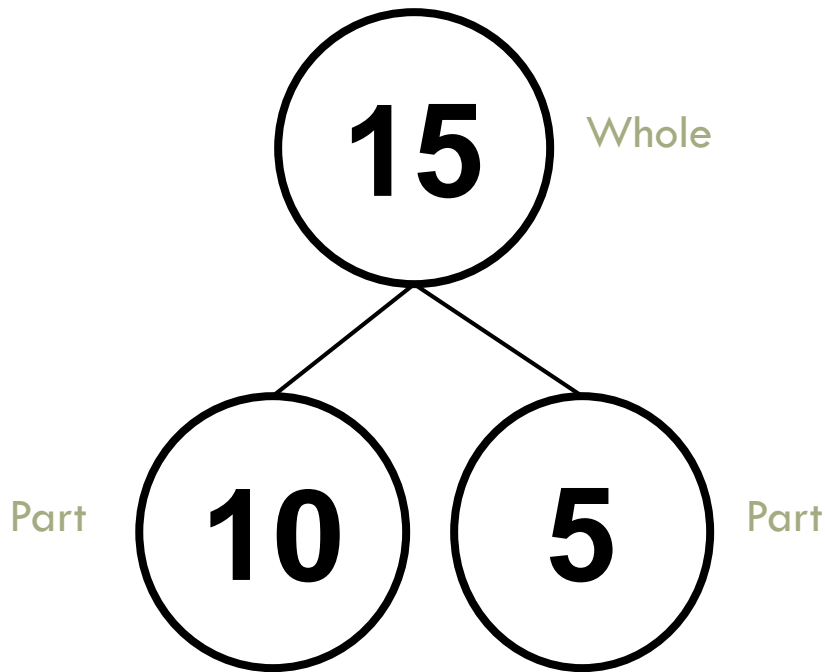


$$9 + 7 = 10 + 6$$
$$16 = 16$$



Common Eureka Strategies

- Number Bonds
 - Understanding the relationship between number parts
 - “Decomposing” numbers
 - “Composing” numbers



Common Eureka Strategies

□ Number Bonds

- Practice with thinking about numbers flexibly allow students to reason as a means to solving more complex problems.

First Grade

$$15 - 9 = 6$$

5 10

$$10 - 9 = 1$$

$$1 + 5 = 6$$

Second Grade

$$465 - 198 = 267$$

265 200

$$200 - 198 = 2$$

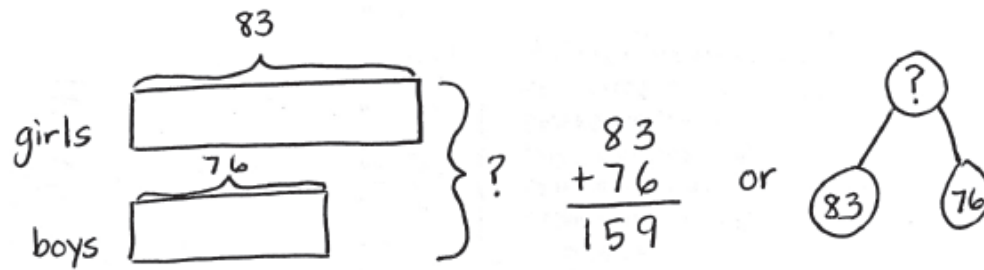
$$2 + 265 = 267$$

Common Eureka Strategies

- Tape Diagrams
 - ▣ Visual models that use rectangles to represent parts of a whole
 - ▣ Used to illustrate number relationships

Third Grade

There are 83 girls and 76 boys in the third grade. How many total students are in the third grade?

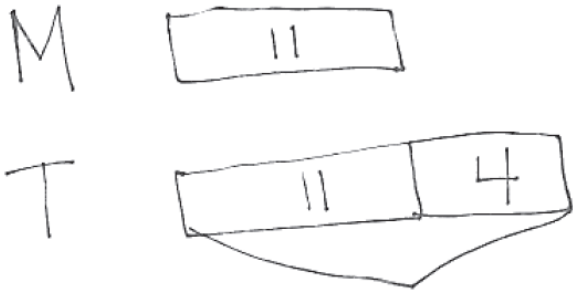


There are 159 students in third grade.

Common Eureka Strategies

First Grade

Willie saw 11 monkeys at the zoo. He saw 4 fewer monkeys than tigers. How many tigers did he see at the zoo?

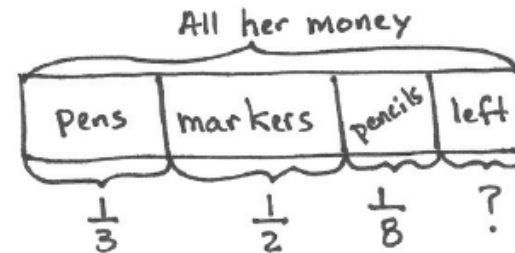


$$11 + 4 = 15$$

Willie saw 15 tigers.

Fifth Grade

Jing spent $\frac{1}{3}$ of her money on a pack of pens, $\frac{1}{2}$ of her money on a pack of markers, and $\frac{1}{8}$ of her money on a pack of pencils. What fraction of her money is left?



Jing had $\frac{1}{24}$ of her money left.

$$\begin{aligned} & 1 - \frac{1}{3} - \frac{1}{2} - \frac{1}{8} \\ &= \frac{2}{3} - \frac{1}{2} - \frac{1}{8} \\ &= \frac{2}{3} - \frac{5}{8} \\ &= \frac{16}{24} - \frac{15}{24} \\ &= \frac{1}{24} \end{aligned}$$

What to Expect to Come Home

All Teachers at Grand Ridge

- End-of-Module Assessments
 - ▣ No “overall grade.” Instead, graded by standard.
 - ▣ Cover sheet (summary)
- Communication regarding student progress
 - ▣ Timely feedback if any concerns

Teacher/Grade Level Choice

- Homework
 - ▣ May have “Must Do” and “Can Do” problems
- Mid-Module Assessments
- Sprints
- Application Problems
- Exit Tickets
- Problem Set Booklets

How Can You Help?

- Practice counting with your child
 - ▣ Forward and backward
 - ▣ Different starting points
 - ▣ By 1, 10, 5, 2
- Reinforce partners that make 5, 10, the next ten
- Play math games and solve puzzles with your child!



How Can You Help?

- Share a growth mindset.
 - ▣ Embrace challenge – “You may not be able to do this *yet*, but your hard work will pay off!”
 - ▣ Celebrate hard work, not speed
 - ▣ Learn from feedback
- Use online resources to support your child’s learning.

<http://connect.issaquah.wednet.edu/elementary/grand/>

Thank You!

- Please leave any comments or questions on the provided notecard.
- Thank you for coming and for being a part of the great learning happening in every classroom!

