180 Days of
Number Sense Routines
Grade 5
Days 81-100

Calvert County Public Schools

180 Days of
Number Sense Routines

WHY IS DEVELOPING NUMBER SENSE IMPORTANT? Number Sense is the foundational building block for all strands of mathematics. Students who struggle in mathematics do not lack mathematical ability, but rather, they simply do not have a strong number sense on which to build their knowledge. Just as we are not born knowing how to read, we are not born with Number Sense. It must be developed and nurtured over time through a progression of understandings about numbers and their relationships to one another. With time and focused practice, students come to understand that numbers are meaningful, and outcomes are sensible and expected. Number Sense development encourages students to think flexibly and promotes confidence with numbers.

WHAT IS A NUMBER SENSE ROUTINE? A routine is an activity or event that occurs on a regular basis over time. Routines provide a framework for our day to support both the teacher and students. Routines help to build community and create a safe learning environment for students. Routines build a sense of belonging, ownership, and predictability which make the classroom a place to take risks. We learn through risk-taking; we take risks when we feel safe; we feel safe in a supportive learning environment; we create supportive learning environments through routines. Just as we have established routines for bus dismissal and fire drills, we must also establish routines that build mathematical thinking and discourse.

180 Days of
Number Sense Routines

HOW WILL THESE NUMBER SENSE ROUTINES BENEFIT ME AND MY STUDENTS? What teachers do and how they do it is critically important and has a profound impact on the quality of the educational experience of our students. Effective pedagogy, the art and science of teaching, is a key element in the learning process. The Number Sense are models of effective pedagogy and ensure that the critical Number Sense instruction we provide is equitable to all our students regardless of geography, teacher experience, or student circumstance. As we prepare our students to be mathematically proficient in their lives beyond the classroom walls, these Number Sense routines will help to lay the critical foundation for all future mathematical endeavors.

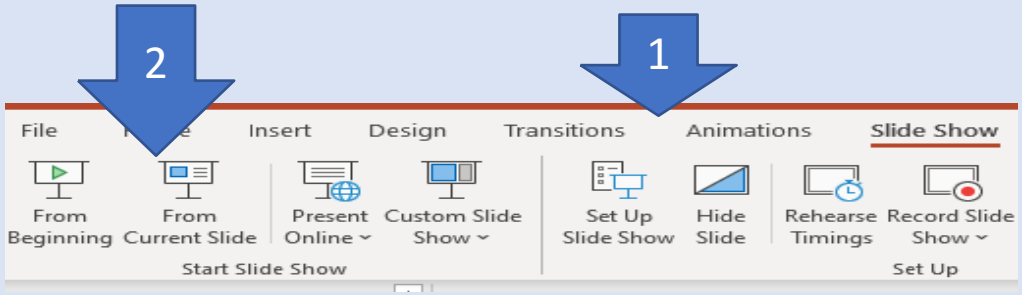
WHAT ARE THE CCPS IMPLEMENTATION EXPECTATIONS? Number sense routines have been developed for all 180 instructional days in grades 1-5. These routines are to be used every day, including early dismissal, late arrival, and field trip days. Because the routines do not require a specific order, it is permissible to trade routines among days to best match the time available. Number Sense must be built over time. With consistency, we can build students' number sense creating a strong mathematical foundation. If students or the teacher is struggling with a routine, it is expected that the teacher collaborate with colleagues to build capacity in that routine – do not just choose to skip the routine. If additional help is needed, the teacher should seek the assistance of their content specialist or mathematics supervisor.

180 Days of
Number Sense Routines

HOW TO RUN POWERPOINT IN SLIDE SHOW MODE:

Slides with animation features, must run in Slide Show mode of PowerPoint for the animations to work correctly.

1. Select <Slide Show> from the menu at the top
2. Select <From Current Slide>



HOW TO ANNOTATE STUDENT THINKING ON THE SLIDE:

- With the slide in Slide Show mode, right click on the slide
- Select <Pointer Options> then choose <Pen>

180 Days of
Number Sense Routines

Acknowledgements

We are grateful to those who have inspired this project – and there have been many. These slide decks were designed for Grades 1–5 with custom-built daily routines for each grade level. The nine routines blend original creations, adaptations, and borrowed OER materials. We have made our work available in Open Educational Resources so that others may benefit as we have. Our deepest gratitude and respect to all those who helped move our work forward, and a special thank you goes to the following whose own work had such a tremendous impact on our 180 Days of Number Sense Routines:

- *Decide & Defend* and *Quick Count* routines were adapted from templates created by Grace Kelemanik and Amy Lucenta at http://FosteringMathPractices.com
- *Estimation Clipboard, Esti-Mysteries,* and *Splat!* templates created by www.SteveWyborney.com
- *Same But Different* discussion from Developing Grayscale Thinking by Looney Math Consulting at https://www.samebutdifferentmath.com
- *Which One Doesn't Belong* tasks adapted from http://wodb.ca by Mary Bourassa

2-Step Counting Pattern

Day 81

- **SAY**: "Today, our choral counting is a bit more complex and our numbers will become very large in a short amount of time.
- We will begin by writing the number 1 as our starting value.
- Now we will ***double the number and add 1***. Double our starting number 1 (we get 2) and add 1 (that's a new value of 3). Write the number 3 as the second number in the sequence.
- We will count slowly and together.
- As you count, I will chart the values.
- Afterwards, we will look for **patterns** created by the counting routine."

SEQUENCE:
1, 3, 7, 15, 31, 63, 127, 255, 511, 1023, 2047, 4095, 8191, 16383, 32767, 65535

Patterns of note:
- The ones place has a pattern of 1, 3, 7, 5, …
- The number increase because we are multiplying and adding whole numbers
- The numbers are 1 more than double of the previous number – that is because of the pattern we selected
- The difference between neighboring numbers is getting greater and greater (i.e. the difference between 1 and 3 is only 2, but the difference between 7 and 15 is 8)

CHORAL COUNTING

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Looking for Patterns

n x 2 + 1

Day 81

CHORAL COUNTING

1	_____
3	_____
7	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Use the NEXT SLIDE with students.

Here is are some possible responses. This list is not all-inclusive.
Additional ideas encouraged!

IMPORTANT! Give students TIME & SPACE to discuss the ideas they want to defend with a partner before beginning a whole-class discussion. Allow them to grapple with the concepts.

Justin:

- $1.00 for 10
- 5 x 0.14 = 0.50 + 0.20 = 0.70
- 1.00 + 0.70 = $1.70 for 15 erasers
- Making each eraser more than $0.10 each since 15 erasers at 10 cents each would be $1.50
- Students may say this one is better because you get what you need, and you spend less money.

Rick:

- 20 erasers for $2.00 making each eraser $0.10 each
- Students may say this one is better because you spent LESS on EACH eraser and have extras.

Day 82

DECIDE & DEFEND

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Use Numbered Heads

READ to Understand

Decide

Draft

Defend

Reflect

Day 82

The office supply store is having a sale on pencil erasers. You can buy **10 for $1.00** or pay **$0.14 each**.

Justin says he **needs 15 erasers** and plans to buy 1 pack of 10 for $1.00 and another 5 erasers for $0.14 each.

His friend Rick says buying 20 erasers for $2.00 is the better deal.

Do you agree with Rick? Use math to justify.

DECIDE & DEFEND

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Day 82

Reflect on Learning

- A new math idea I learned today is….
- Next time I interpret someone else's work, I will…. *(ask myself, pay attention to,…)*
- When you are trying to convince someone of your mathematical ideas, it is important to….

DECIDE & DEFEND

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Day 83

Esti-Mystery

Students use clues to solve the estimation mystery. After all of the clues are revealed, students will have enough information to determine if their initial estimate was correct.

ESTIMATION

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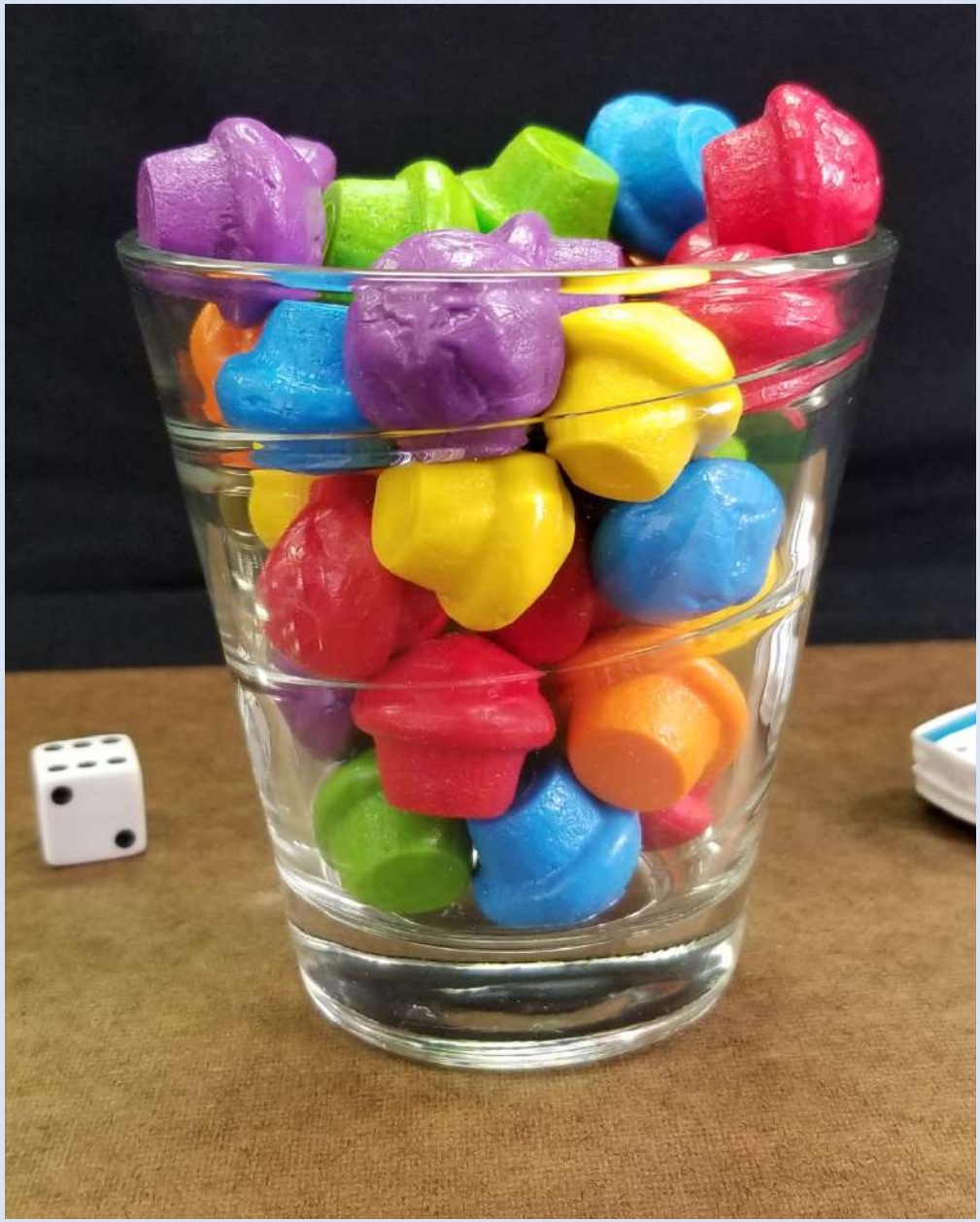
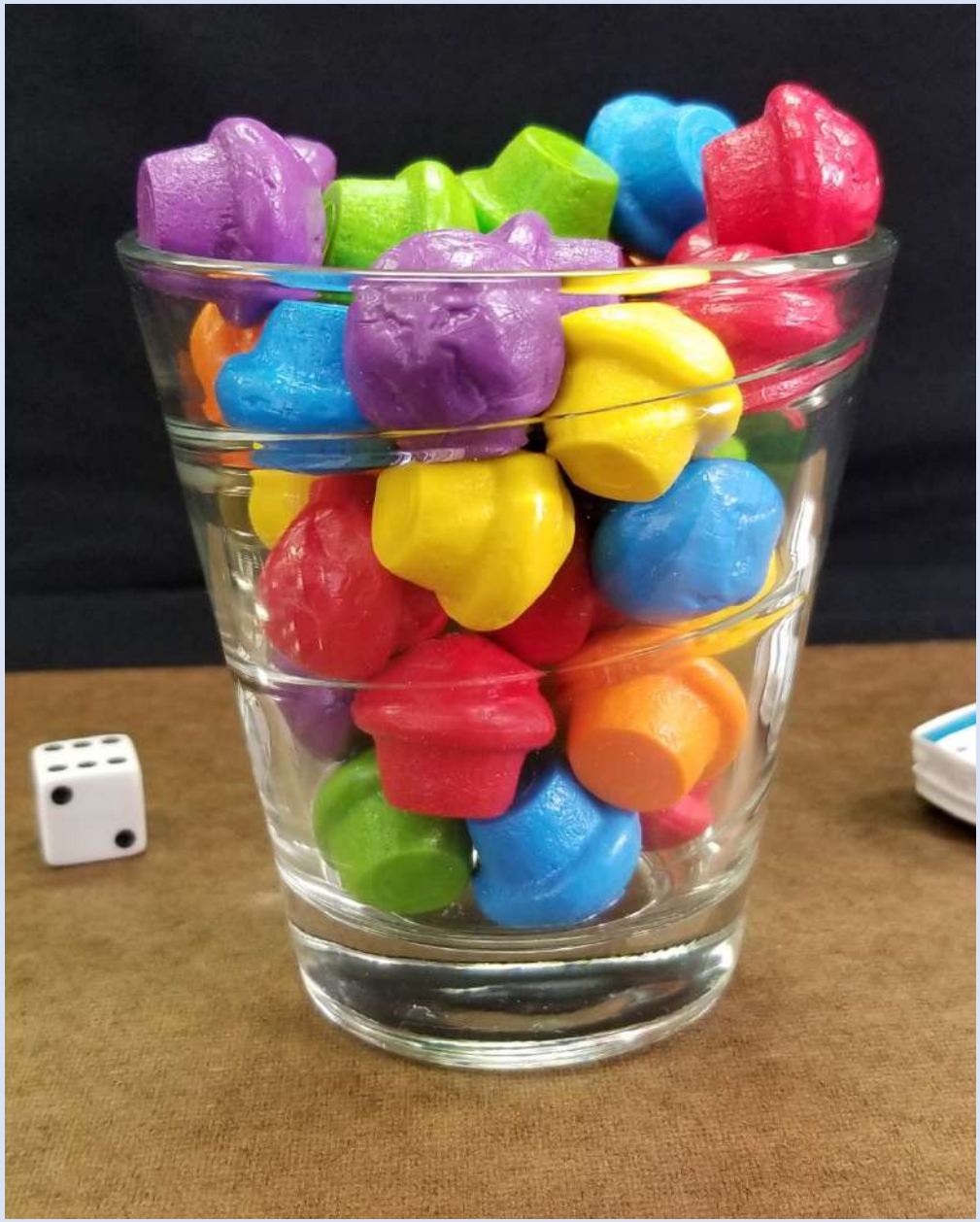
Day 83



How many objects are in the glass?

As the clues appear, use the information to narrow the possibilities to a smaller set. Then use estimation to determine which of the remaining answers is the most reasonable. You may use a paper to keep track of ideas if your teacher allows it.

ESTIMATION



Clue #1

The answer is a number less than 50.

Clue #2

The answer is an odd number.

Clue #3

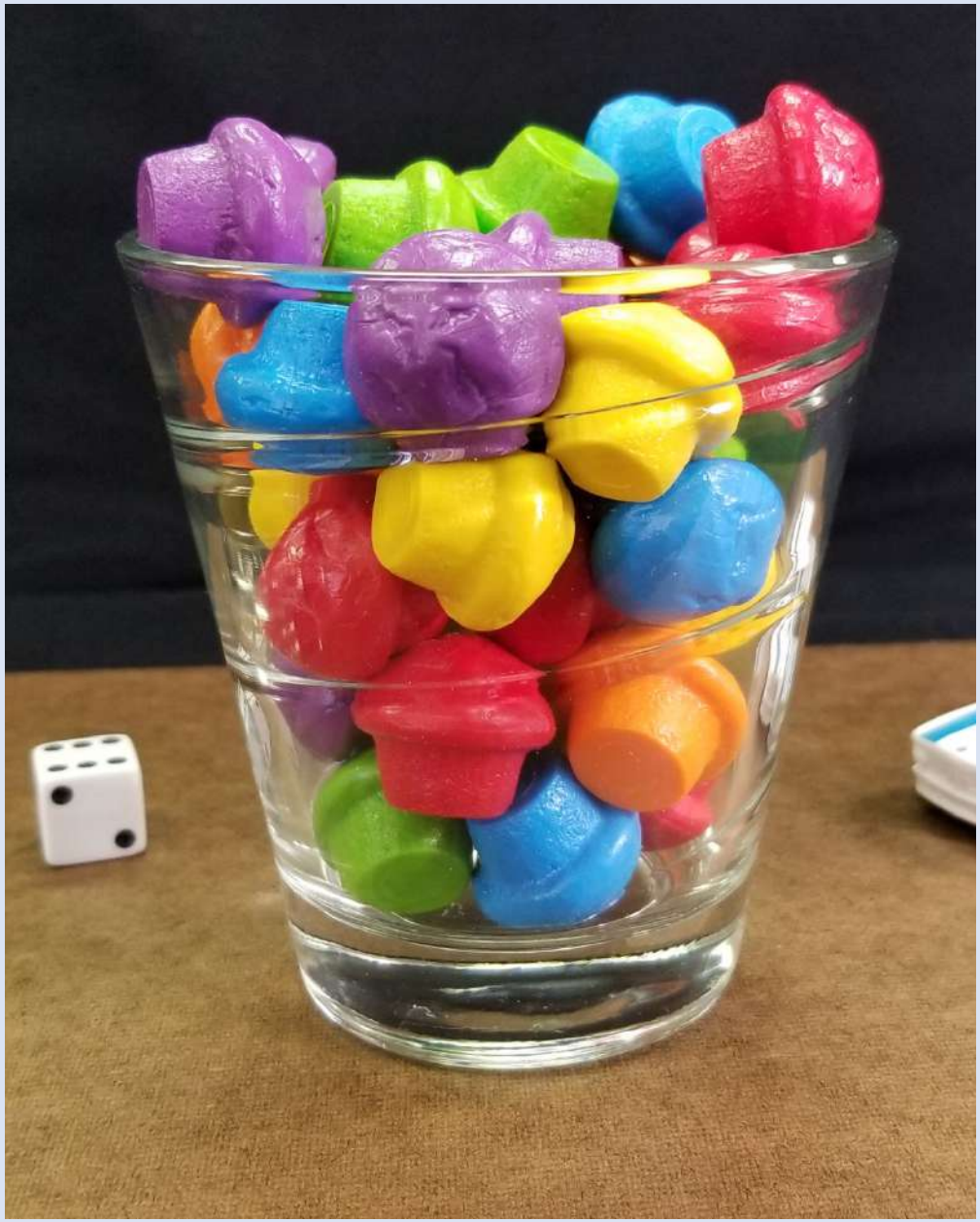
The answer is a multiple of 3.
For example: 3, 6, 9, 12 …

Clue #4

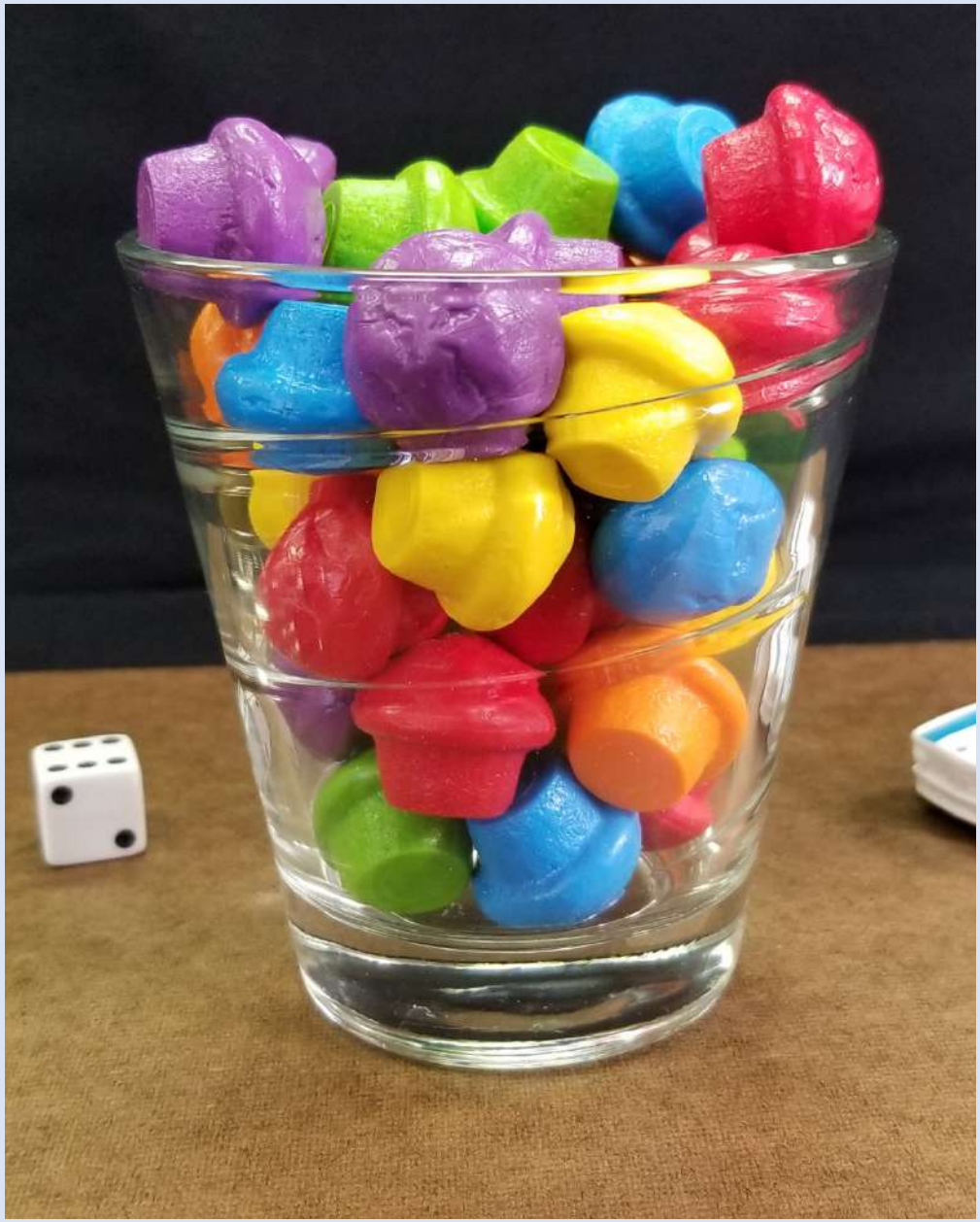
The answer includes 2 different digits.

Clue #5

Neither of the digits is a 2 or a 4.



By combining the clues and estimation, you now have enough information to determine the answer.



The Reveal
Click to see the answer.

www.stevewyborney.com

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Day 84

Pattern A:	3	5	7	9	11
Pattern B:	15	25	35	45	55

TEACHER NOTES

BEFORE

This slide has the String of expressions that you will use for today's Number Talk. You can use Smart Ink, right click for PowerPoint Pen, or convert this slide to Smart Notebook so you can easily annotate on the slide. The annotation is an important part of the routine. The expressions should be presented one-at-a-time with skills building on one another. Remember, students will come with a wide variety of strategies. Allow student sharing of these strategies and work toward determining which of the ways were most efficient and brain-friendly.

DURING

MATHEMATICAL PATTERNS

Pattern A: skip count by 2s
Pattern B: skip count by 5s
Connecting pattern: Row A is multiplied by 5 to get the value on row B

Follow-up question:

- What would be the next number on the row labeled Pattern A? (13)
- What would be the next value on the row labeled Pattern B? (60)
- How do you know? What is ANOTHER way we could know?
    - Skip count Row B by 5s
    - Multiply the value on Row A by 5 to get the value on Row B

Remember, students will come with a wide variety of strategies. Allow student sharing of these strategies and work toward determining which of the ways were most efficient and brain-friendly.

AFTER

After solving the expressions with various strategies, help students to understand how these expressions were all related.

NUMBER TALK

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Day 84

NUMBER TALK

What number patterns do you see on this chart?

- Can you determine the pattern for the row labeled Pattern A?

Pattern A:	3	5	7	9	11
Pattern B:	15	25	35	45	55

- Can you determine the pattern for the row labeled Pattern B?

- What is the mathematical pattern connecting Pattern A to B?

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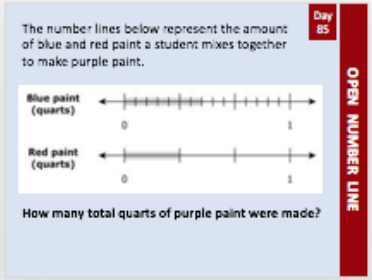
Use the NEXT SLIDE with students.

Here is are some possible responses. This list is not all-inclusive.
Additional ideas encouraged!

Day 85

OPEN NUMBER LINE



Do not allow students to use paper/pencil – remember, this task is designed to build NUMBER SENSE and reasoning skills.

GUIDING QUESTIONS as needed:

- Will the total be more or less than 2 quarts? How do you know? (less)
- Will the total be more or less than 1 quart? How do you know? (less because the student used less than ½ quart for each color)
- I noticed that the Blue paint number line was divided into smaller parts. How many parts is the 1 quart divided into? (15)
- How many fifteenths of a quart did the student use of blue paint? How do you know? (7)
- How much red paint was used? (1/3 or 5/15) How do you know?
- Which value will be easier to use when we consider the 7/15 of blue paint? (5/15 of red because the denominators will be the same which makes adding the values MUCH easier)
- What is the total amount of purple paint made? (7/15 blue + 5/15 red = 12/15 quarts of purple paint)
- Is 12/15 more than 1 whole quart or less than 1 whole quart? (less) How do you know?

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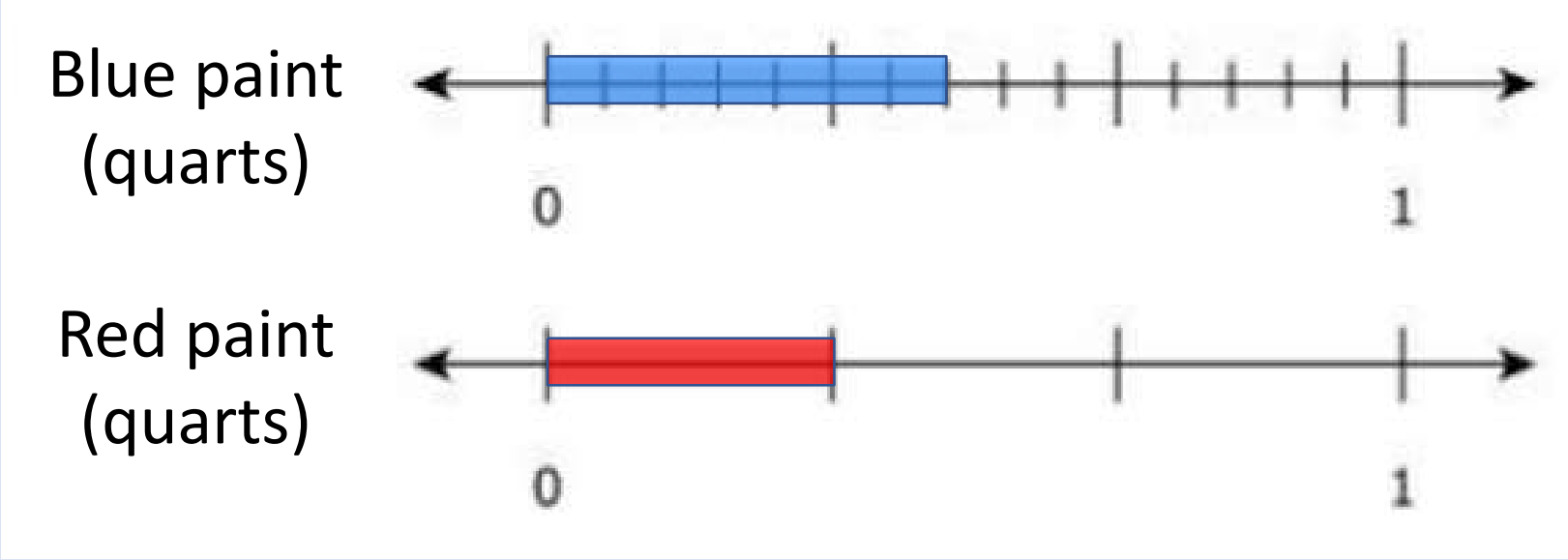
Day 85

This is MENTAL MATH – no paper or pencil.

The number lines below represent the amount of blue and red paint a student mixes together to make purple paint.



Question: **What do you know for sure about the total amount of paint?** Let's discuss

OPEN NUMBER LINE

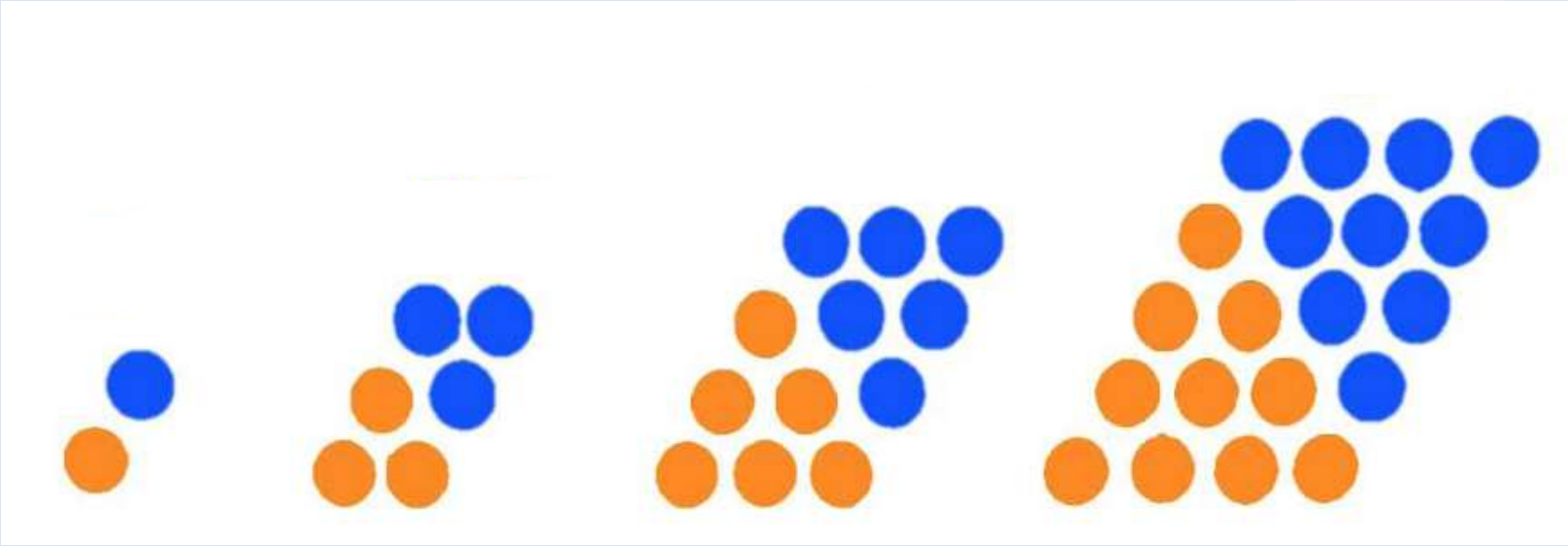
Directions for QUICK COUNT routines

Quick Count is an instructional routine designed to shift attention away from mindless calculations and toward necessary structural interpretations of mathematics. This routine fosters structural thinking, Math Practice 7, and promotes student discourse.

1. Pair students into Numbered Heads (or Peanut Butter Jelly partners, etc.)
2. Show students the first image slide for about 3-5 seconds depending on the complexity of the image and level/experience of the students.
3. With their partner, students discuss everything they can remember about the image.
4. After a minute of partner discussions, have students share ideas to the group.
5. Create a list of student ideas that students can refer to when the image is shown again.
6. Tell students that you are going to put the slide back up. Ask students to COUNT the images using some type of shortcut strategy (chunking, symmetry, arrays…)
7. Show the image again and leave it displayed as students look for counting shortcuts.
8. With their partner again, students discuss how many objects are in the image and how describe the shortcut counting strategy they used. Give time for partner discussions. Walk around and take notes about discussions to determine which students will share.
9. Use the slide with identical images as a comparative visual as students take turns explaining how they counted the objects in the image.
    - Use your notes to select different students with different approaches.
    - The student explains his/her shortcut as the teacher **gestures** over the image.
    - A **different student** is asked to **REPEAT the original student's shortcut** as the teacher **annotates** (circles, underlines) on the image to show the shortcut used.
    - Repeat the process using different student-generated shortcut strategies.
10. End by asking students to explain what was "mathematically important"

Day 86

What do you notice?



1 2 3 4

QUICK COUNT

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Day 86

QUICK COUNT

What did you NOTICE?

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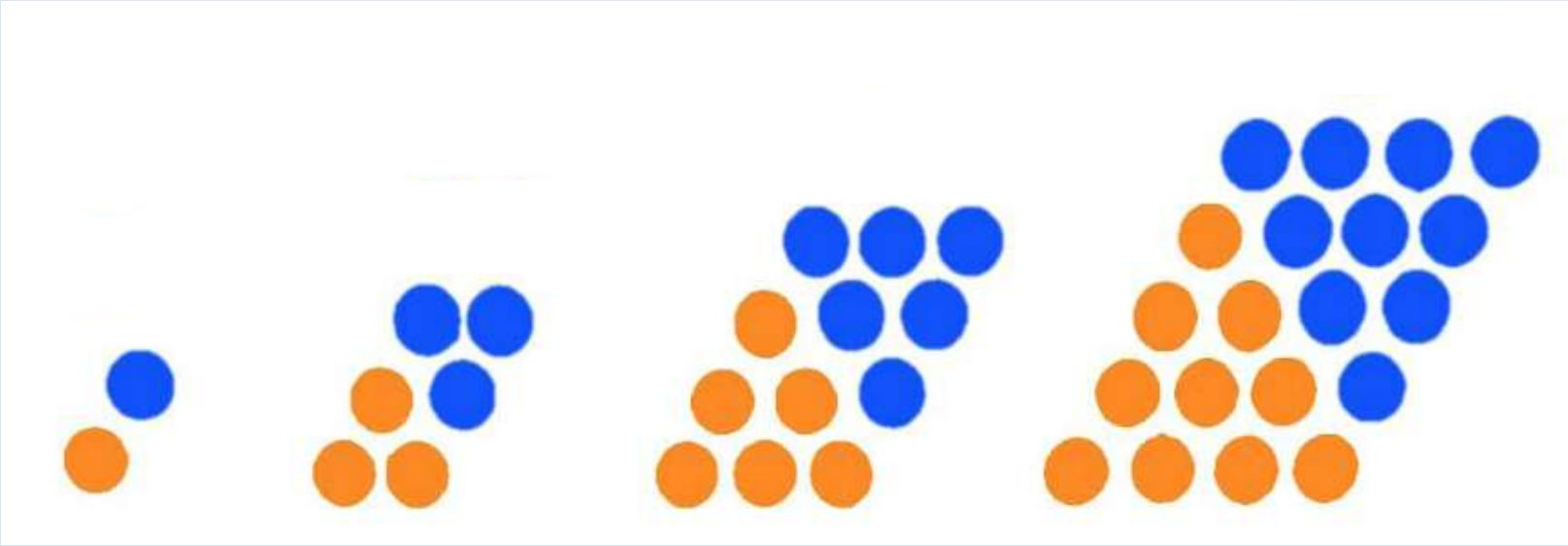
Day 86

How many dots altogether?

What counting shortcut did you use?



1 2 3 4

QUICK COUNT

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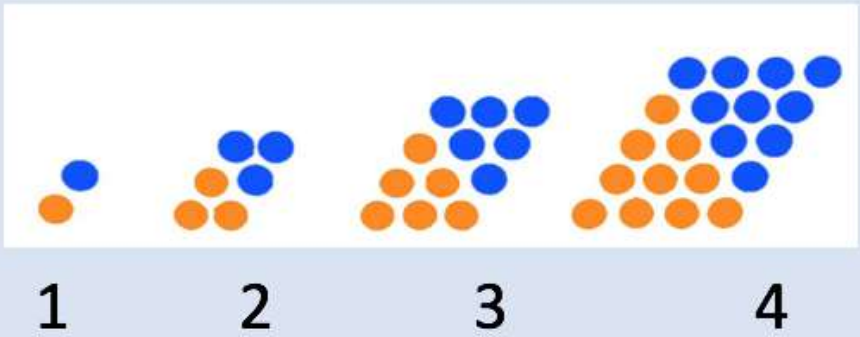
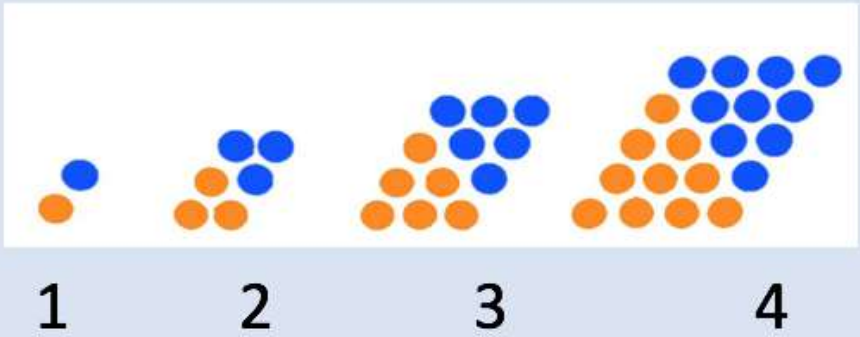
Day 86

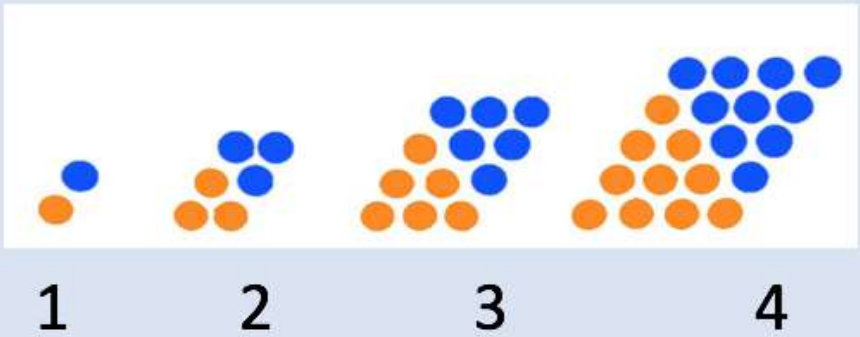
QUICK COUNT



I noticed _____ so I _____



(They) noticed _____ so they _____



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Day 86

Reflect

What was mathematically important?

QUICK COUNT

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Intro

SAME BUT DIFFERENT

About the SAME BUT DIFFERENT Routine

Same But Different is a powerful routine for use in math classrooms. The *Same but Different* routine compares two things **calling attention to both how they are the same and how they are different**. This apparent paradox is the beauty of the activity. In this analysis, *instead of making a choice and trying to prove that these are the same or prove that they are different, **students consider how two items can be both**.* This is a critically important distinction from many other tasks.

One of the reasons students struggle in math is that they struggle to make connections. Someone who has poorly developed number sense might see each number as its own thing, and not part of the larger network of mathematical ideas. A mathematical conversation using the language *same but different* that calls attention to how a new concept in math is the same as another familiar and comfortable concept but different in a specific way is a useful conversation in growing a student's network of connections. Building these connections could also reduce anxiety as children become the sense-makers in the conversation.

Source: www.samebutdifferent.net.com/about

Facilitating the SAME BUT DIFFERENT Routine

1. Present the slide
2. Ask students to THINK about how the two items are both the SAME AND DIFFERENT.
3. Do not allow conversation at this time -- give ample think time for students to consider the possibilities
4. After some time has been given (a minute or so), ask students to talk with their Number Head partner or small group about their ideas -- allow this conversation to dominate the time dedicated to this routine
5. As students talk with partners/groups, walk around and listen to the conversations. Resist jumping in; let them grapple with the ideas with their peers.
6. As you walk around listening, take notes. You will use these notes to help direct the whole group conversation.
7. Refocus student attention to the front of the room for a whole group debriefing session. Ask students to share some of their ideas about how the two were both the SAME and DIFFERENT – use the notes you took to bring out important ideas that will benefit the entire room.

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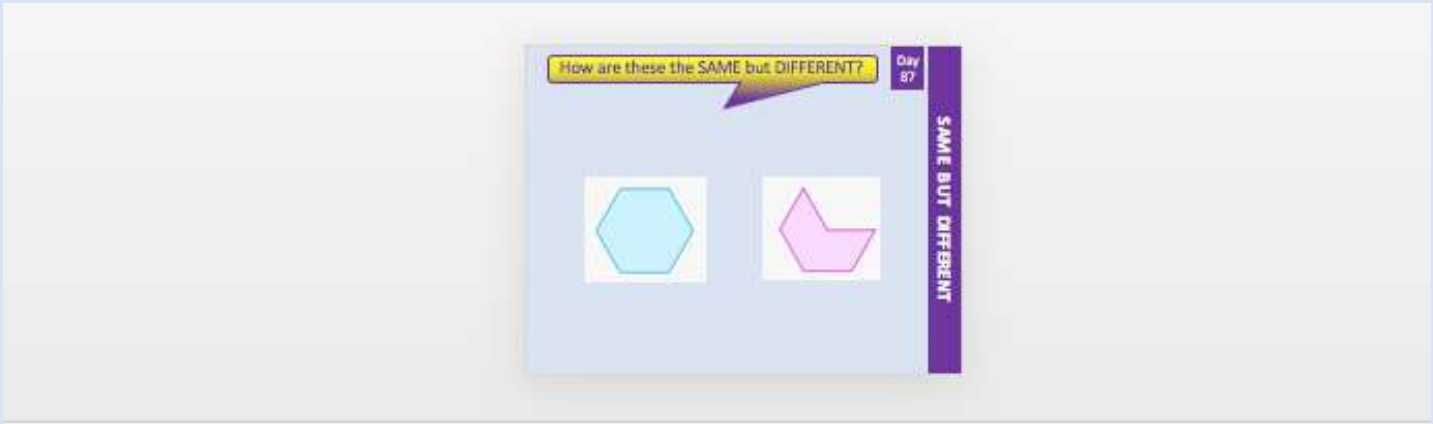
Day 87

Use the NEXT SLIDE with students.

Here is are some possible responses. This list is not all-inclusive.
Additional ideas encouraged!

- Students may simply recognize a component that makes them the “same” OR “different”
- Some students may state a same/different relationship and say that they are the “same because…. But different because….”



SAME:
- **Both are HEXAGONS (6-sided figures)**
- **The sum of the interior angles is 720 degrees for both**
- **The length of each side appears to be equal in both figures**

DIFFERENT
- **The blue figure is referred to as a “regular hexagon"**
- **The pink figure is an irregular hexagon**
- **All of the angles are equal in the blue figure but the angle measurements are not all equal in the pink figure**

In case you were wondering: Properties of all Regular Hexagons (the blue figure)
- All the sides are equal in length
- Each interior angle measures 120°
- The sum of all the interior angles of a regular hexagon is 720°

SAME BUT DIFFERENT

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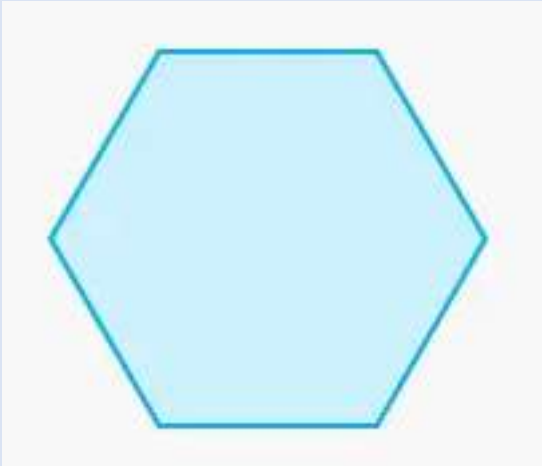
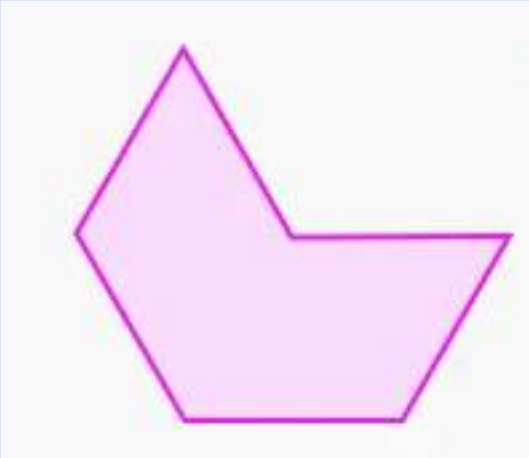
How are these the SAME but DIFFERENT?

Day 87





SAME BUT DIFFERENT

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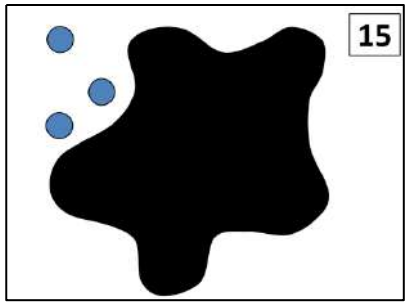
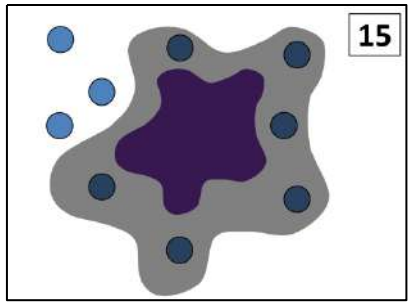
Day 88

SPLAT!

In this level, you'll find the number of dots under the large Splat!



Then you'll find the number of dots under the small Splat!



The number set is not high or complex; the MOST important part of this routine will be the discussion of HOW STUDENTS COUNTED – be sure to explore the variety of ways that students counted and to then highlight the methods that were especially efficient.

Light the Future
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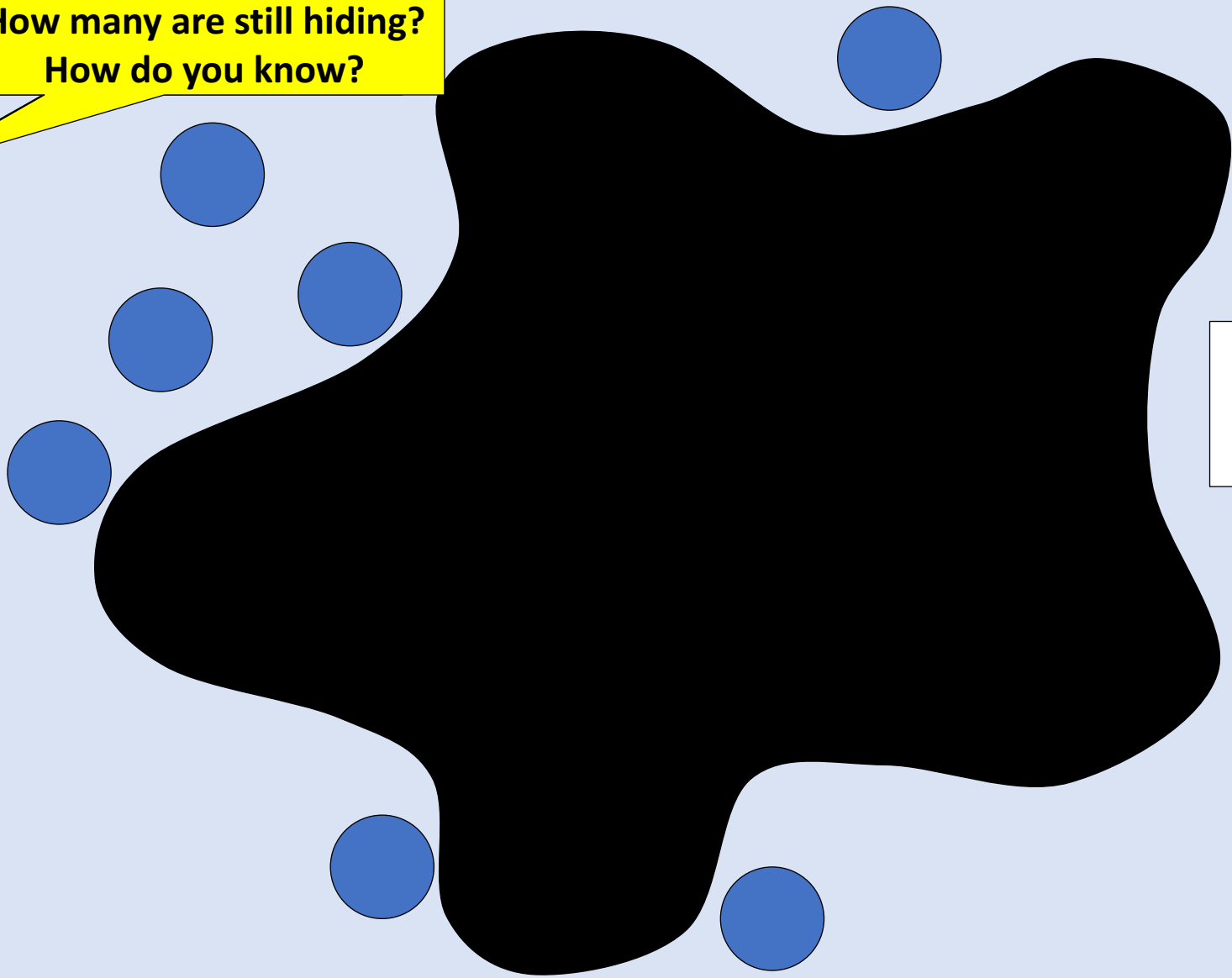
There’s another Splat!
How many are still hiding?
How do you know?



Day 88

19

SPLAT!

Use the NEXT SLIDE with students.

Here is are some possible responses. This list is not all-inclusive.
Additional ideas encouraged!

Day 89

WHICH ONE DOESN'T BELONG?

These are cards from the game Phase 10. Which one doesn't belong? Remember to phrase the answer in a way that connects the other 3 sets.

POSSIBLE RESPONSES (as always, there are other possibilities, too!):

- A does not belong because three of the cards sets use cards of all the same color.
  Set A does not have 3 cards of the same color.
- B does not belong because three of the card sets use only single digit numbers.
  Set B uses a 10 which is not a single digit number
- C does not belong because three of the card sets contain a the number 8.
  Set C does not have the value of 8 as one of its cards.
- D does not belong because three of the card sets have three numbers that are in sequence (6,7,8 – 8,9,10 --- 3,4,5).
  Set D does not have values that do not create a numerical sequence.

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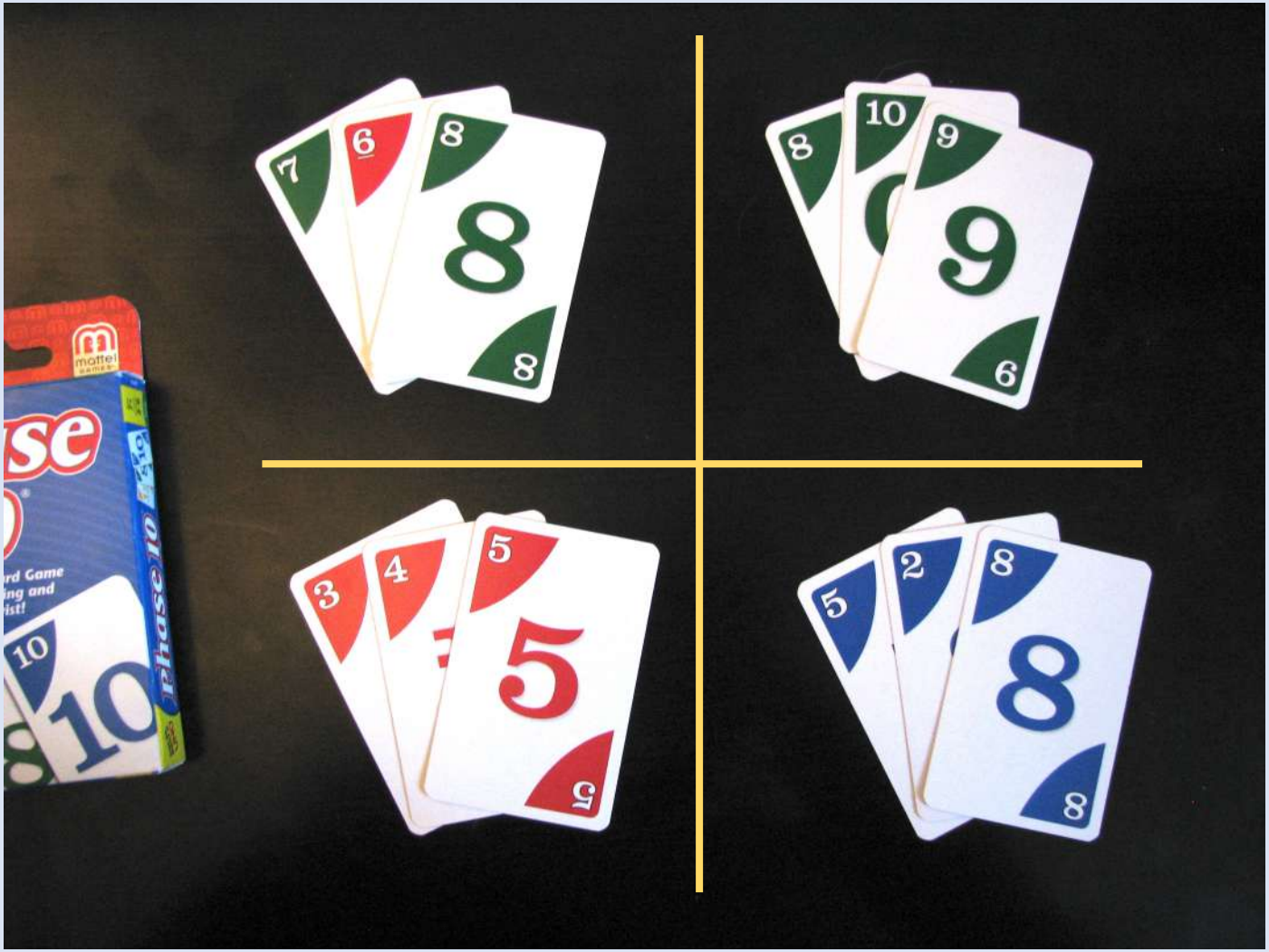
Day 89

WHICH ONE DOESN'T BELONG?

A

B



C

D

"Three of the card sets…"

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Use the NEXT SLIDE with students.

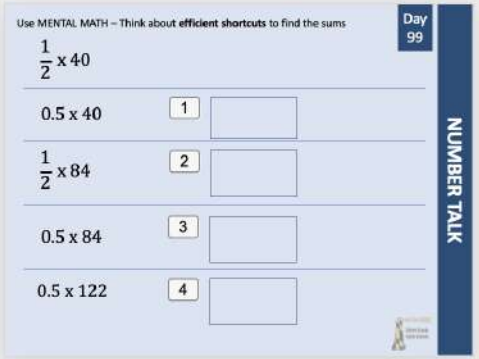
Day 90

TODAY'S GOAL: Since Day 90 marks the halfway point of the schoolyear, our Number Sense will be related to the number ½

**Before beginning today's Number Sense Routine, set the stage by explaining why today is a special day:

Today is Day 90 of school. We go to school 180 days each year.
*The number **90 is HALF of 180**, so today marks the HALFWAY point of our school year.*

To celebrate the HALFWAY point of school, our Number Sense Routine will be multiplying by 1/2



The first model sets the stage for mental computations. Help students to understand (or remind students) that ½ x 30 is the same thing as "half of 30" which most students should recognize as 20.
The second model is simply a different form of the first. Give students time to discuss with partners to DISCOVER that 0.5 x 40 is the same as ½ x 40 so the product will be of equal value.
Students should be able to mentally calculate ½ of 84 as 42. Have several students explain their reasoning (remember, this is a MENTAL TASK, no paper for Number Talks).
The next is, once again, a different form of the previous 0.5 x 84 which yields the same product of 42.
The last one does not scaffold with ½ of the number – at this point, it is hoped that students will make the connection of 0.5 x 122 and realize that they are looking for half of 122. Some may solve it by decomposing it (half of 100 is 50 and half of 22 is 11, so 50+11=61. Others may think half of 120 is 60 and half of 2 is 1, so 60+1=61. Others' strategies are likely. Be sure to discuss the various strategies and to help students connect the idea of ½ to 0.5 and to realize that the result will be the same regardless if they use the fraction or the equivalent decimal value.

NUMBER TALK

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Day 90

NUMBER TALK

Use MENTAL MATH – Think about **efficient shortcuts** to find the sums

$$\frac{1}{2} \times 40$$

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Day 91

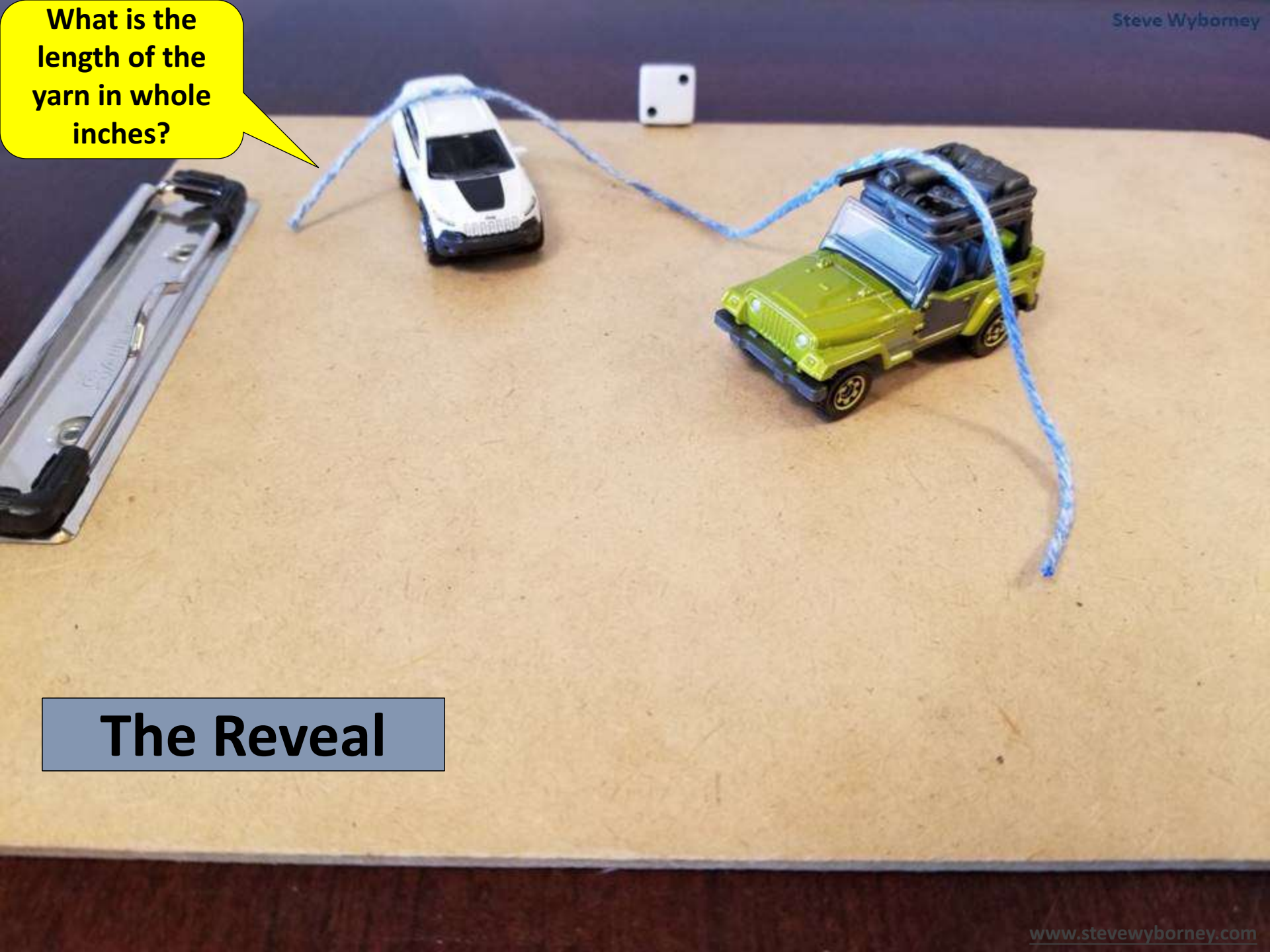
Estimation Activity

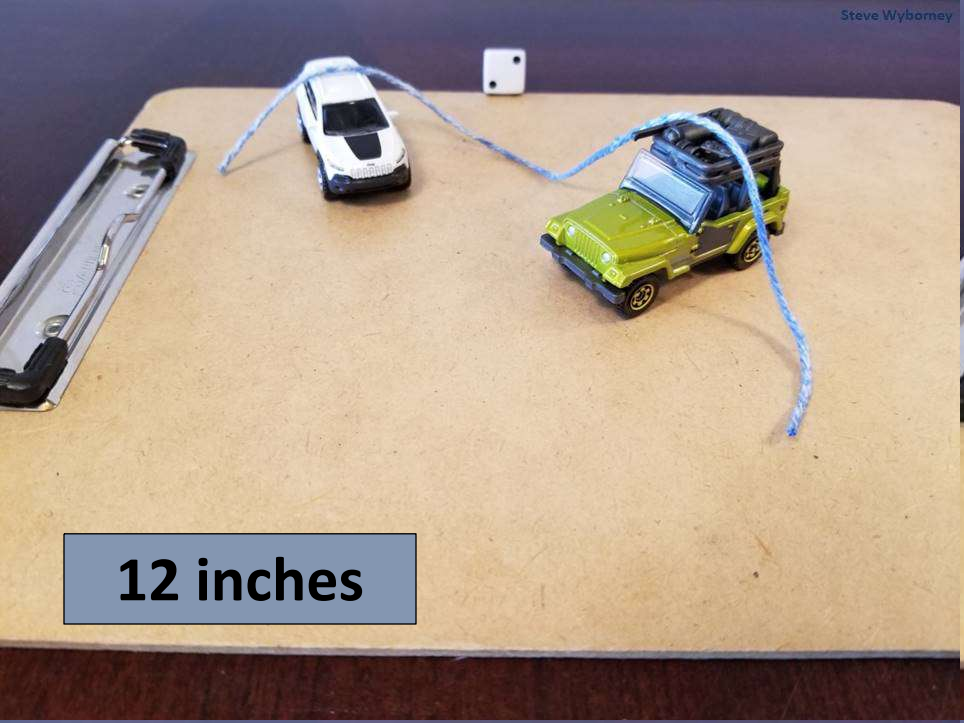
Have you already watched the teacher information video?

When you are ready to use this activity,
use the PowerPoint platform so the slides work properly.

PROMPT: **What is the length of the string in whole inches?**

ESTIMATION


What is the length of the yarn in whole inches?
Steve Wyborney
The Reveal
www.stevewyborney.com


Steve Wyborney
12 inches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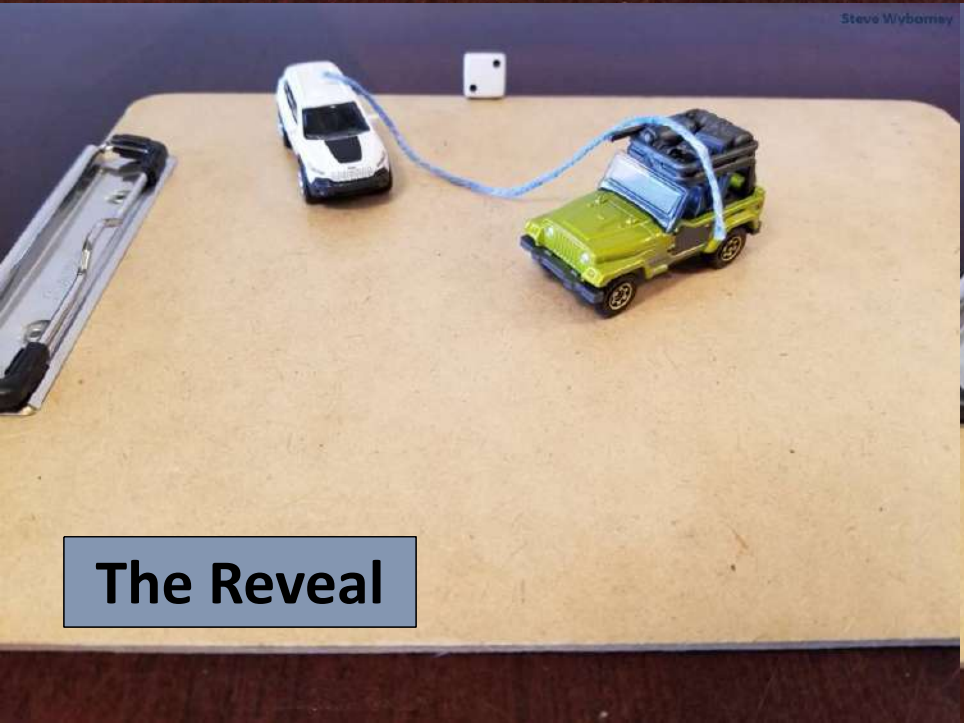
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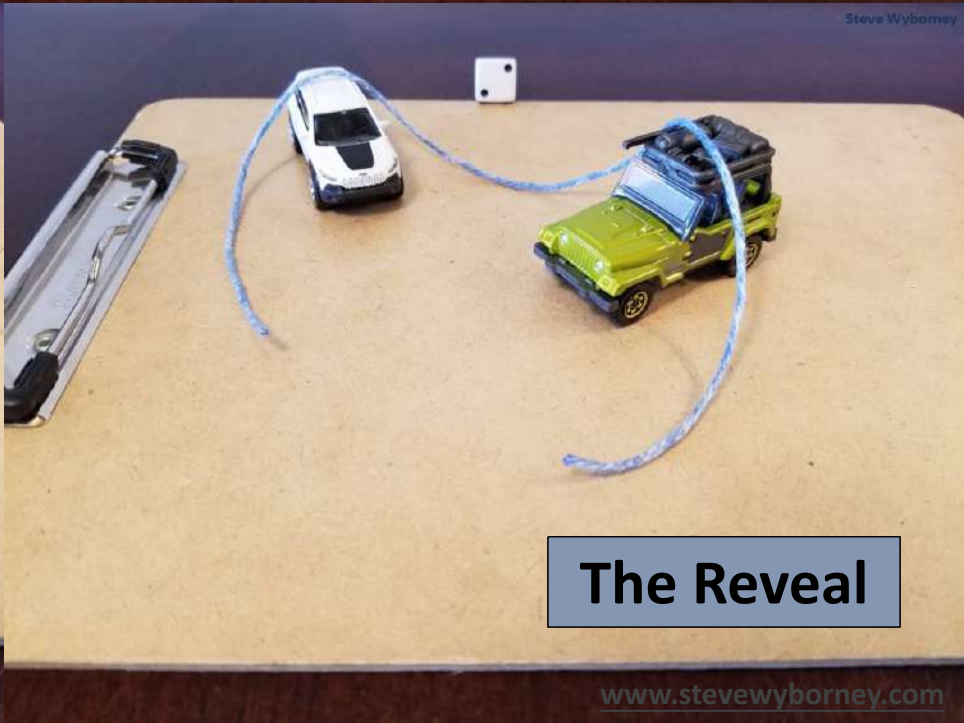
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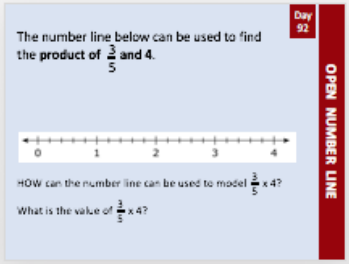
Use the NEXT SLIDE with students.

Here is are some possible responses. This list is not all-inclusive.
Additional ideas encouraged!

Day 92

OPEN NUMBER LINE



Before beginning any calculations or making marks on the number line, be sure that students thoroughly understand what is being asked.

- Do they understand that the product of 3/5 and 4 means that we will be multiplying 3/5 x 4?
- Do they understand that the question does not want them to use the multiplication algorithm, but rather, expects them to understand how to use the number to MODEL the solution?

OPTION 1: iterations of 3/5 four times

Students should explain that 3/5 would be the space from 0 to the third hash mark.
They should explain that they know it is the third hash mark because the whole numbers are partitioned into 5 equal parts and the fraction asks us to take 3 of those 5 parts. If the whole number was partitioned into a different number of parts, we would not be able to say that the third hash mark is equivalent to 3/5.

The equation asks us to multiply by 4. Another way to think of this is that we need the 3/5 part a total of 4 times, so we can make leaps that span 3 hash marks 4 times to find the ending position on the number line. 3/5, 6/5, 9/5, 12/5 and 12/5 is equivalent to 2-2/5, so 3/5 x 4=2-2/5

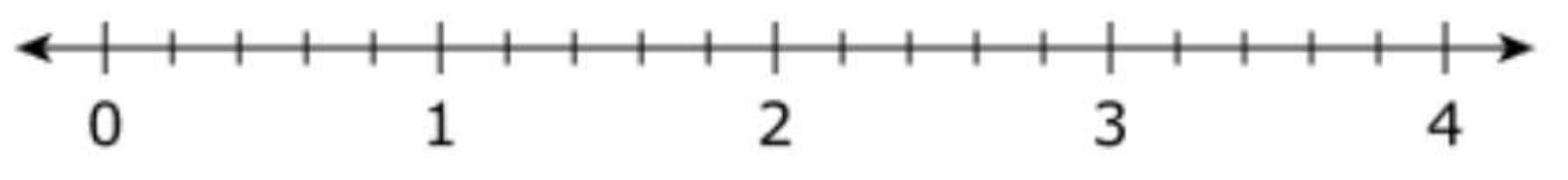
OPTION 2: partition 4 wholes into fifths and take 3 of the 5 parts

Students might think of the 4 wholes partitioned into five equal parts since we need 3 out of 5 parts for the 3/5 fraction.
If 4 is partitioned into 5 equal parts, each part is 4 has marks long since there are 20 hash marks to 4.
If we take 3 of the 5 parts, we will be on the 12th hash mark since 3x4=12. The 12th hash mark falls at 2-2/5 on the number line.

Day 92

OPEN NUMBER LINE

The number line below can be used to find the **product of** $\frac{3}{5}$ **and 4**.



HOW can the number line can be used to model $\frac{3}{5}$ x 4?

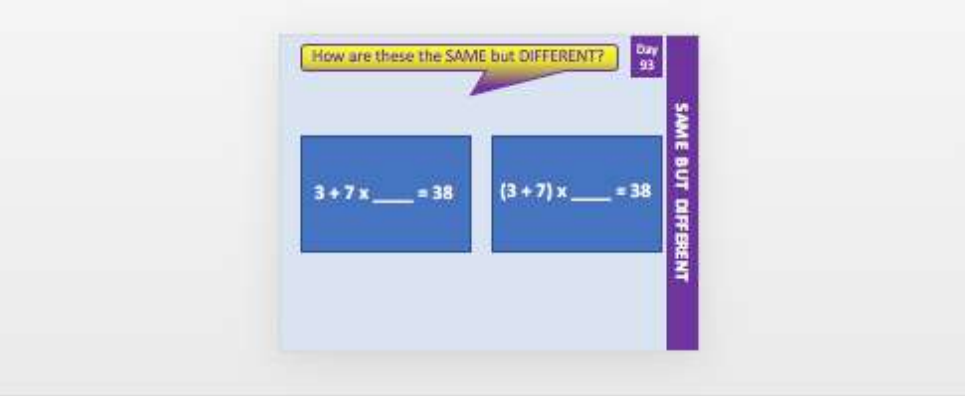
What is the value of $\frac{3}{5}$ x 4?

Day 93

Use the NEXT SLIDE with students.

Here is are some possible responses. This list is not all-inclusive.
Additional ideas encouraged!

- Students may simply recognize a component that makes them the “same” OR “different”
- Some students may state a same/different relationship and say that they are the “same because…. But different because….”



$3 + 7 \times \underline{5} = 38$
$(3 + 7) \times \underline{3.8} = 38$

SAME:
Same operations
Same values shown
Values written in the same order
Same final value of 38

DIFFERENT:
Different missing number (5 and 3.8)
Different order for correctly calculating (follow order of operations)

- $7 \times \underline{5} = 35$ then $35 + 3 = 38$
- $3 + 7 = 10$ then $10 \times \underline{3.8} = 38$

SAME BUT DIFFERENT

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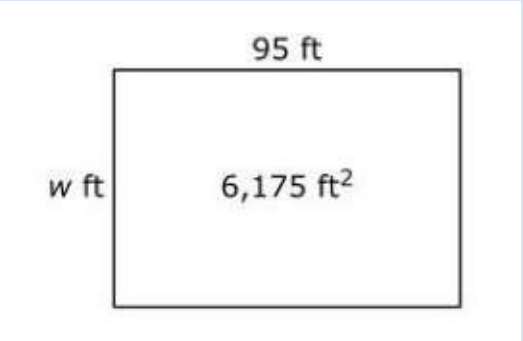
How are these the SAME but DIFFERENT?

Day 93

SAME BUT DIFFERENT

$3 + 7 \times \_\_\_\_ = 38$

$(3 + 7) \times \_\_\_\_ = 38$



Without calculating the precise value, determine if the width of the rectangle will be greater than or less than 80 feet. How do you know?

Day 94

NUMBER TALK

TEACHER NOTES

BEFORE

This slide has the String of expressions that you will use for today's Number Talk. You can use Smart Ink, right click for PowerPoint Pen, or convert this slide to Smart Notebook so you can easily annotate on the slide. The annotation is an important part of the routine. The expressions should be presented one-at-a-time with skills building on one another. Remember, students will come with a wide variety of strategies. Allow student sharing of these strategies and work toward determining which of the ways were most efficient and brain-friendly.

DURING

AREA: Missing factor

Solution: The width will be less than 80 feet.

Possible reasoning: The length of the rectangle is 95 feet, or approximately 100 feet. 100 x 8 = 800, so 100 x 80 = 8000. The area of 6175 is less than the estimated value of 8000.

Some students may choose to be even more precise by subtracting the excess (100-95 = 5). Since 80 x 5 = 400, we know that if the width was 80, the area would be 8000 – 400 = 7600 which is much less than 6175, so the width must be less than 80 feet.

AFTER

After determining the solution using various strategies, help students to understand that exact values are not always necessary in mathematics depending upon the purpose for the calculation. Discuss the methods that were most effective as mental math strategies.

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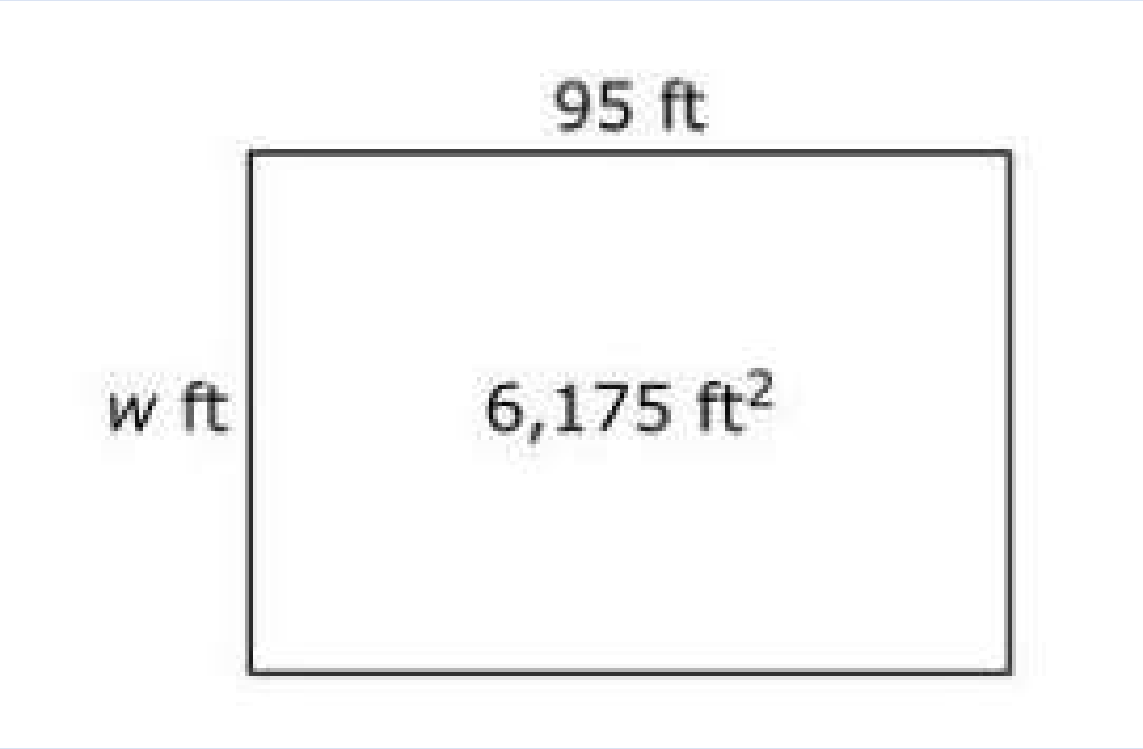
Day 94

Without calculating the precise value, determine if the width of the rectangle will be **greater than or less than 80 feet**. How do you know?



NUMBER TALK

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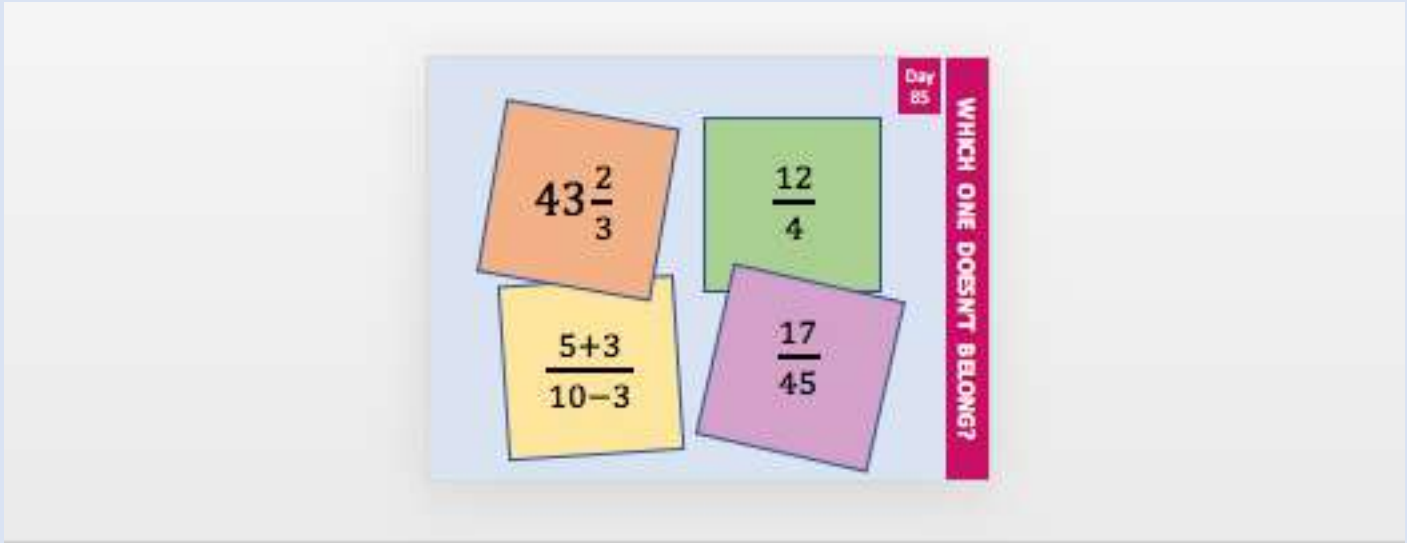
Use the NEXT SLIDE with students.

Here is are some possible responses. This list is not all-inclusive.
Additional ideas encouraged!



A. Three of the fractions are not written as mixed numbers.
   The fraction in the **orange box** is expressed as a mixed number.
B. Three of the fractions are not equivalent to a whole number.
   The fraction in the **green box** is equivalent to a whole number.
C. Three of the fractions are not written as computation expressions.
   The fraction in the **yellow box** uses expressions with computations.
D. Three of the fractions have values that are greater than 1.
   The fraction in the **purple box** has a value less than 1.

Day 95

WHICH ONE DOESN'T BELONG?

$43\frac{2}{3}$

$\frac{12}{4}$

$\frac{5+3}{10-3}$

$\frac{17}{45}$

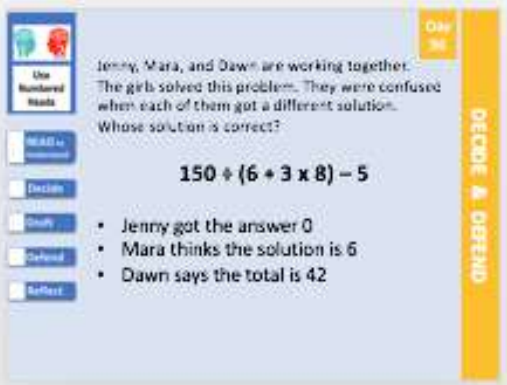
"Three of the fraction expressions…"

Use the NEXT SLIDE with students.

Here is are some possible responses. This list is not all-inclusive.
Additional ideas encouraged!

Day 96

DECIDE & DEFEND



The solution is ZERO. Jenny is correct.
Students must follow the order of operations:
Everything within a group is solved first. Within the problem or any group mult/div operations are solved first in the order they appear (NOT multiply THEN divide).
Then all add/sub are solved in the order they appear.

150 ÷ (6 + 3 x 8) – 5
150 ÷ (6 + 24) – 5
150 ÷ (30) – 5
5 – 5
0

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Use Numbered Heads

READ to Understand

Decide

Draft

Defend

Reflect

Day 96

Jenny, Mara, and Dawn are working together. The girls solved this problem. They were confused because each of them got a different solution. Whose solution is correct?

$$150 \div (6 + 3 \times 8) - 5$$

- Jenny got the answer **0**
- Mara thinks the solution is **6**
- Dawn says the total value is **42**

DECIDE & DEFEND

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Day 96

Reflect on Learning

- A new math idea I learned today is…
- Next time I interpret someone else's work, I will… *(ask myself, pay attention to,…)*
- To convince a skeptic, it's important to ….

DECIDE & DEFEND

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Day 97

NUMBER TALK

3,195 ÷ 15
What is the value of Q in this area model?
How does decomposing 3,195 in this way make it easier to determine the quotient?

Area Model

	200	10	S
15	3,000	Q	45

TEACHER NOTES

BEFORE
The next slide has an image that uses the area model to solve a division equation. Use this slide in Smart Notebook so you can easily use the pen to annotate.

DURING
Multiplication
This is a model of dividing using the area model. The dividend (3195) represent the total area.
The 15 is the divisor and is placed along the left edge of the area model.
The 3,195 is decomposed into the sums of smaller values (3,000 + 150 + 45)
3000 is easily divided by 15 to equal 200 (think about 30 ÷ 15 = 2 first)
That leaves 195. We could decompose it into 100 + 90 + 5, but that will not make the division problem simpler; instead, students should look combination that can be calculated easily (195 = 150 + 45 since 150 can be easily divided by 15)

AFTER
Help students to recognize that numbers can be decomposed in a variety of ways to make the problem easier to solve.

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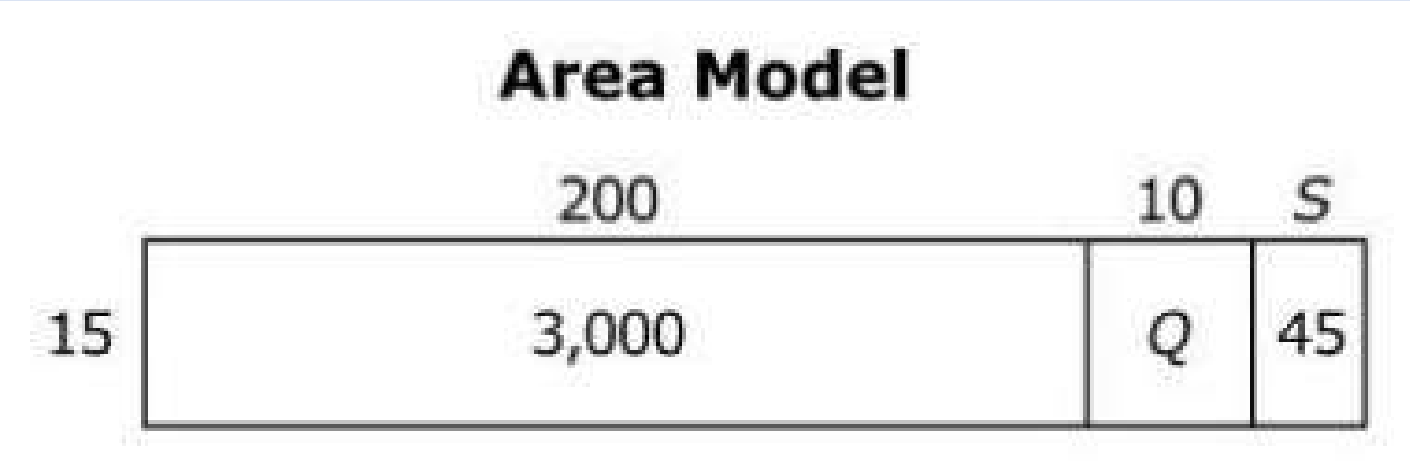
Day 97

3,195 ÷ 15

What is the value of Q in this area model?

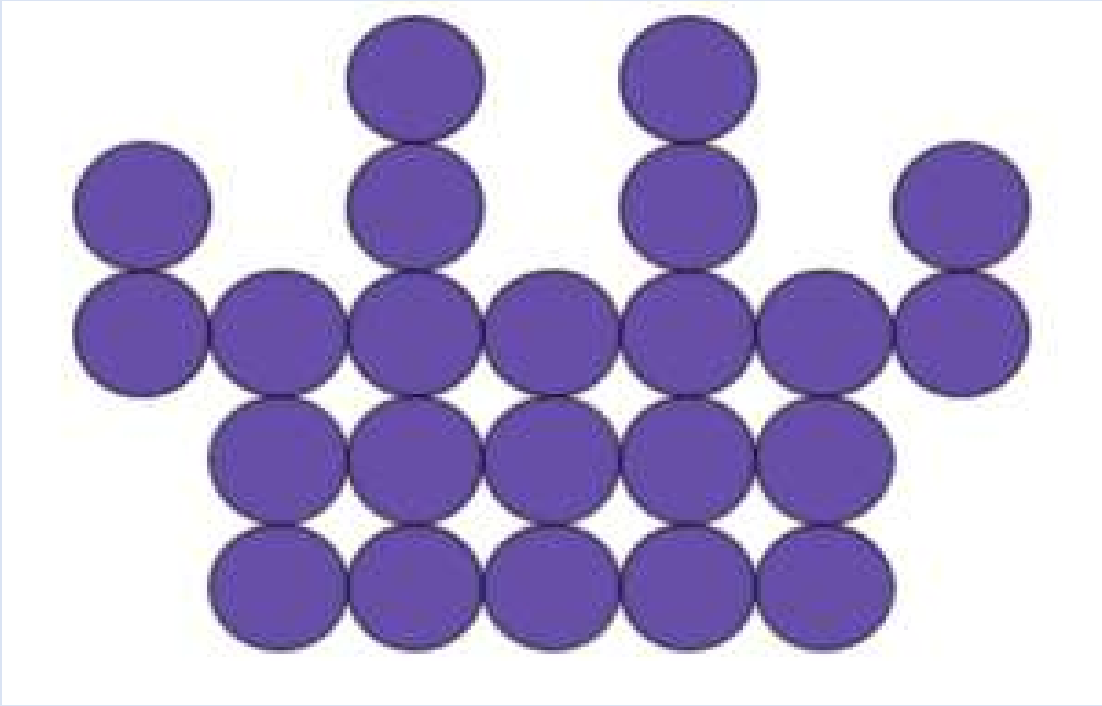
How does decomposing 3,195 in this way make it easier to determine the quotient?



NUMBER TALK

Day 98

QUICK COUNT



What do you notice?

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Day 98

QUICK COUNT

What did you NOTICE?

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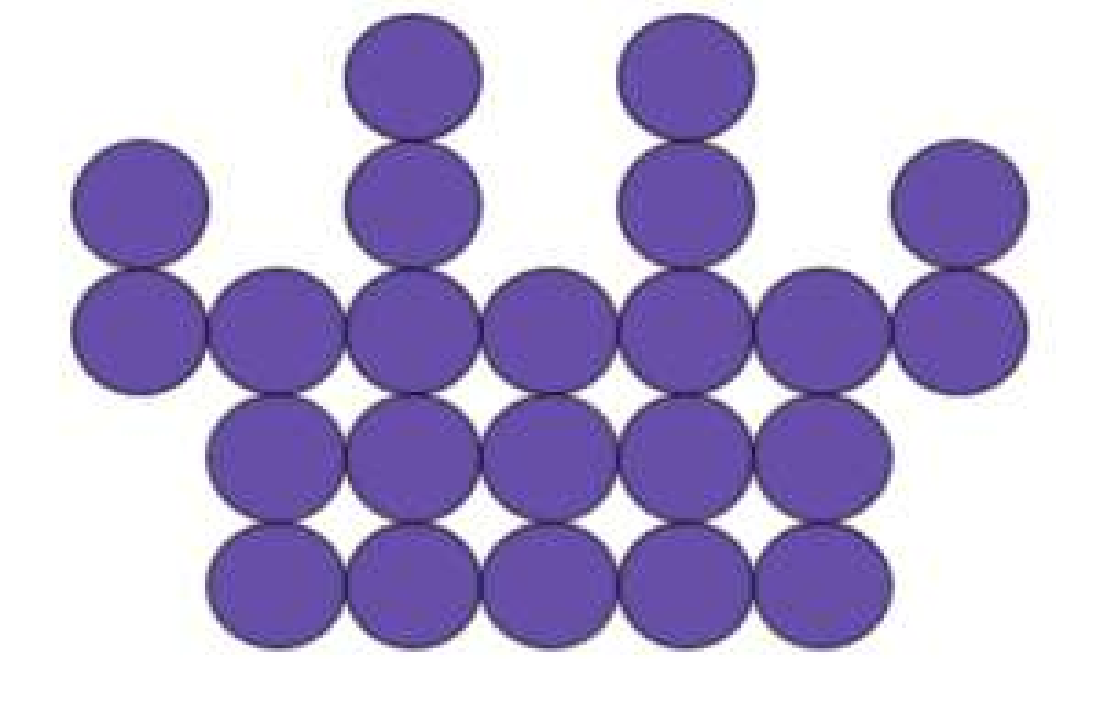
Day 98

How many do you see?

What counting shortcut did you use?



QUICK COUNT

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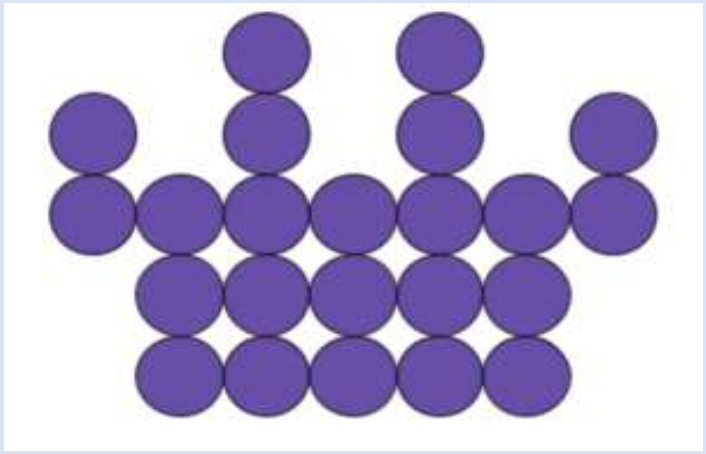
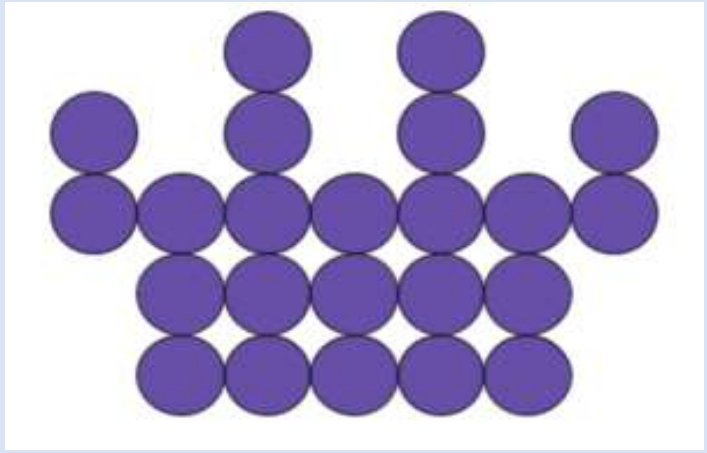
I noticed ____ so I _____

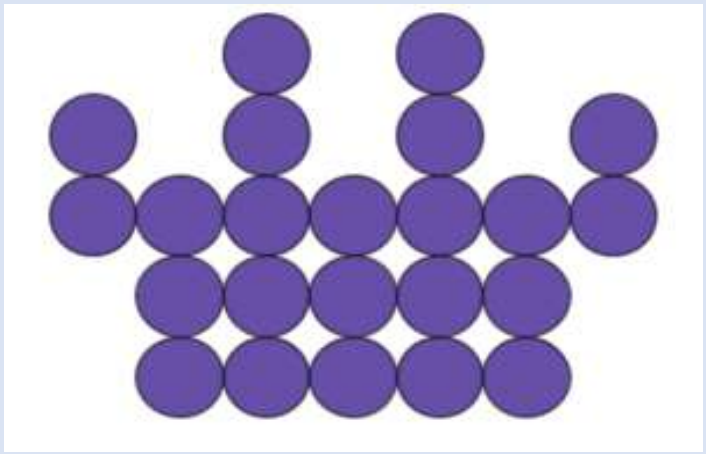
(They) noticed ____ so they___

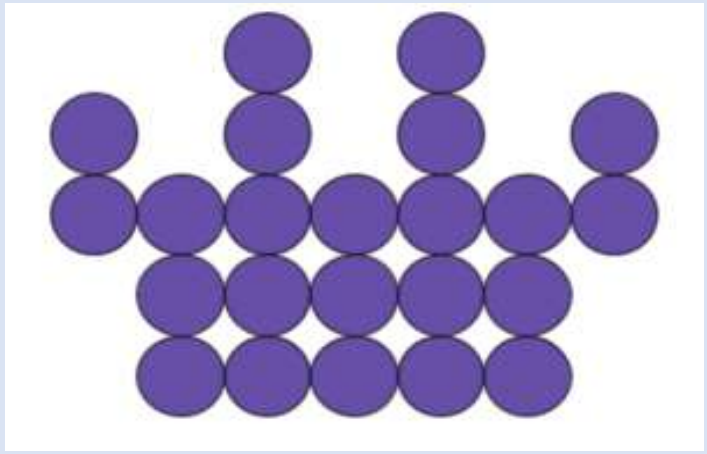
Day 98

QUICK COUNT









Day 98

Reflect

What was mathematically important?

QUICK COUNT

Day 99

CHORAL COUNTING

Adding mixed numbers

- We'll begin with the number $6\frac{1}{3}$
- As we count together, we will ADD $1\frac{1}{3}$
- I will chart our numbers. Look for patterns that we will discuss after we go all the way around the circle.

Run today's slide in PowerPoint on Slide Show mode

Use the next slide as you facilitate the routine.
With each CLICK, the next number in the sequence will be revealed on the chart.
Click to reveal the number AFTER the students say the next number in the sequence.
Take your time; don't rush students. Give think time as needed.
Encourage discussion, as needed, before revealing each number.
After completing the chart, look for and discuss patterns that are noted.
Be sure to explore WHY those patterns have occurred.

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NOTE: This slide MUST be played in Slide Show mode of PowerPoint to work properly

Day 99

Adding mixed numbers: Begin with the number $6\frac{1}{3}$, ADD $1\frac{1}{3}$

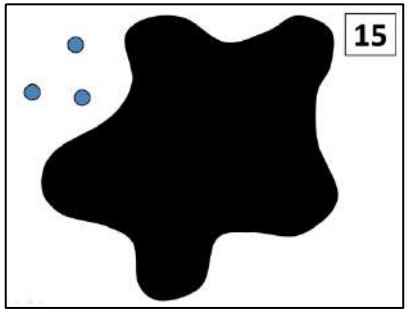
	$6\frac{1}{3}$				

CHORAL COUNTING

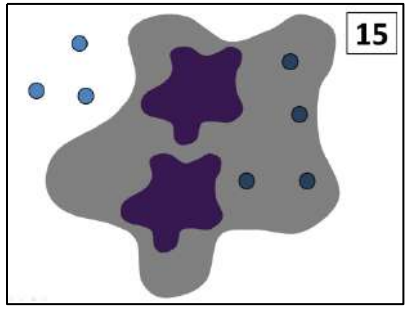
Day 100

NOTE:
The SPLAT! will already be covering some of the dots on the next slide
(it is not a mistake)

In this level, you'll find the number of dots under the large Splat!



Then you'll find the number of dots under each small Splat!



Also, did you know that today is the **1000th day of school for 5th graders** (not a typo)
K through 4th Grade = 180 days x 5 years = 900 days
and they have now attended 5th grade for 100 days, so 900 days + 100 days = 1000 days!

SPLAT!

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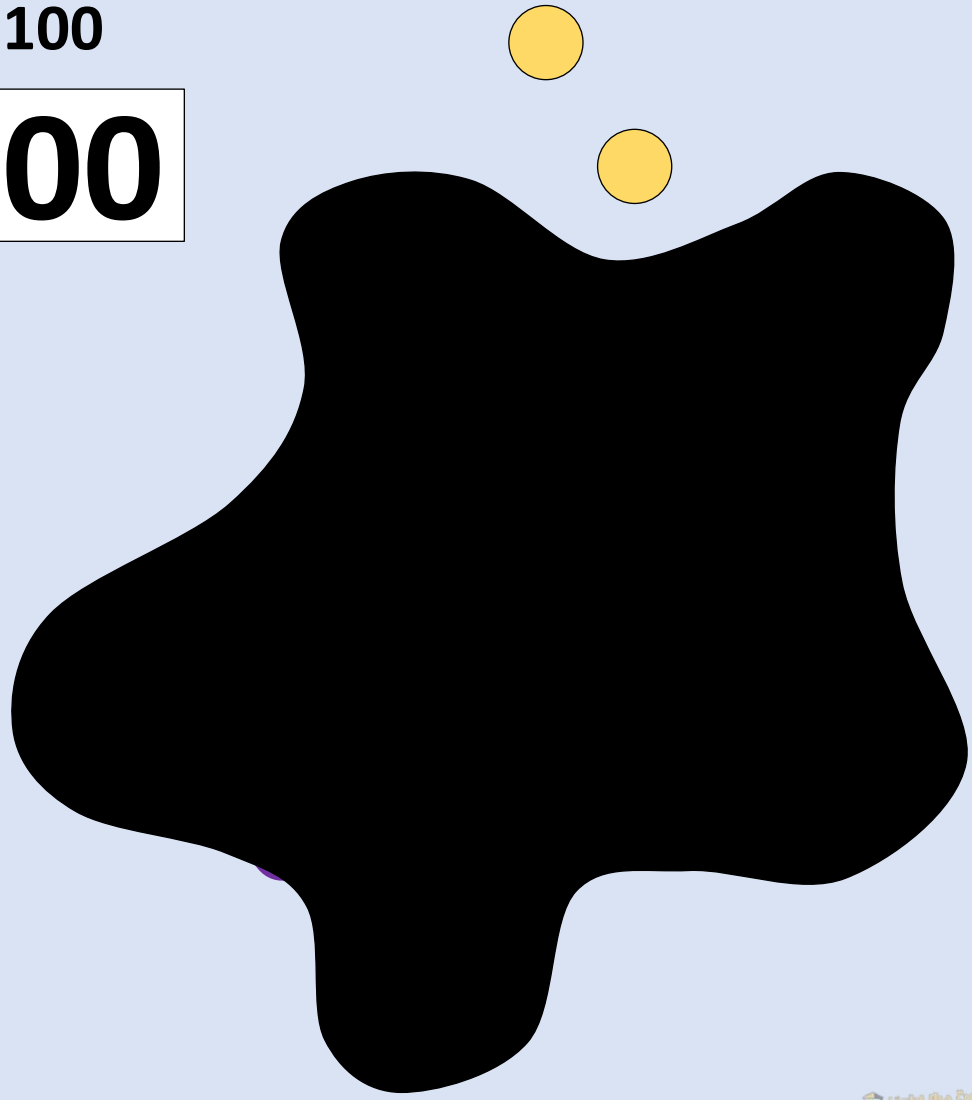
In celebration of today being the 100th day of school, we will use special dots for today's Splat!

Each golden dot is worth 100

The total is worth 1000

Day 100



Oh no! There are more Splats!

Let's look under the small splats to see how many dots are there.

e the same re each e number.

How many dots are under each of the small splats?

How do you know?

SPLAT!

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Based on a template by Steve Wyborney