180 Days of
Number Sense Routines
Grade 2
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.

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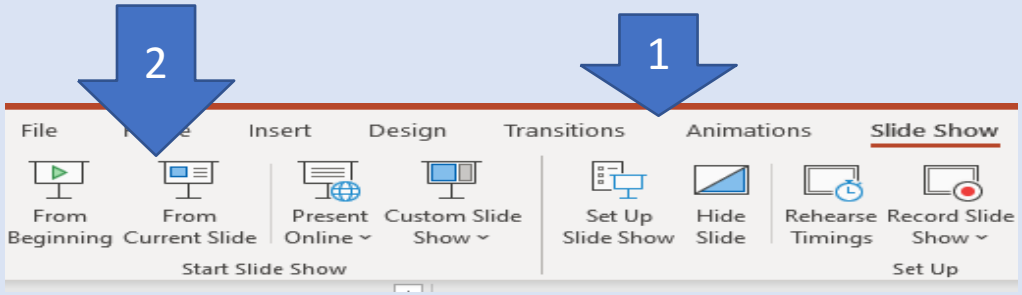
Number Sense Routines

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

Use the NEXT SLIDE with students.

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

Day 81

CHORAL COUNTING

3:25 3:30 3:35 3:40
3:45 3:50 3:55 4:00
4:05 4:10 4:15 4:20
4:25 4:30 4:35 4:40
4:45 4:50 4:55 5:00

PATTERNS:

- Notice that each column ends in 5 or 0
- Notice that the number below is 20 minutes past the time above (that is because we have 4 columns of 5 minutes)
- Notice the pattern of :25 :45 :05 :25 in the first column AND :30 :50 :10 :30 in the second column, etc.…
- Notice the diagonal alternates between 5 and 0 in the last position
- Don't forget to notice that the times are getting later in value since we are counting forward and that each successive number is 5 minutes more than the previous.

*Remember to use 4 columns as shown in the example above and line up the columns to make patterns easy to spot and discuss

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Day 81

Telling Time

- **Let's skip count the time.**
- **We'll begin at the time shown on this clock. What time is shown on this clock?**
- **Okay, now let's skip-count in 5 minute increments until we get to 5:00**
- **When we are done counting, we will look for any patterns that we notice in our skip-counting times**
- **Remember, we are counting slowly all together. Stay with me as I write down the times you say.**

CHORAL COUNTING

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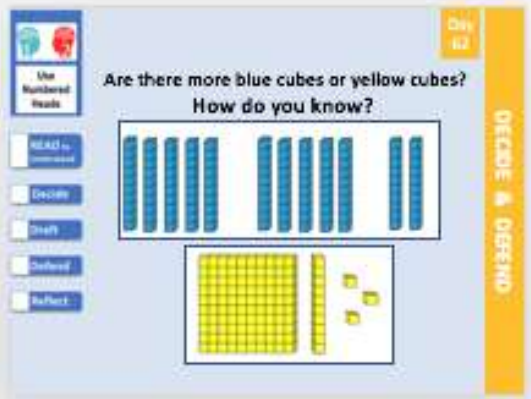
Use the NEXT SLIDE with students.

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

Day 82

DECIDE & DEFEND



Students will use a variety strategies to determine this.
Encourage students to consider that BOTH MAY be possible (it's not).
Listen as students talk with partners.
As you listen, select students to share ideas that will create discussion and thinking.
Remind students that the focus is on developing skill in defending your choice(s), not just knowing the right answer.

Use Numbered Heads

READ to Understand

Decide

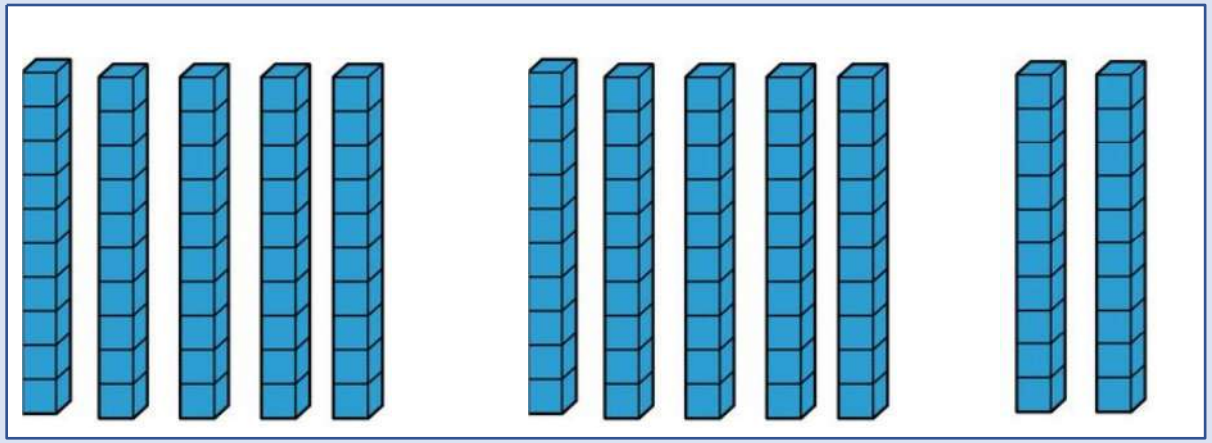
Draft

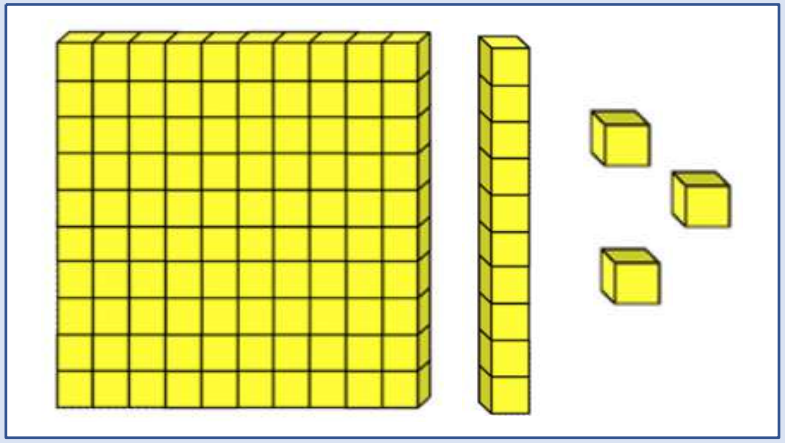
Defend

Reflect

Day 82

Are there more blue cubes or yellow cubes? How do you know?





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,…)*
- To convince a skeptic, it's important to ….

DECIDE & DEFEND

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Day 83

Estimation Activity

A new type of Estimation FUN!

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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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.

*Esti-Mysteries will only work correctly in Slide Show mode of PowerPoint – select “Play from Current Slide”

www.stevewyborney.com

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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.

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499 < 500
981 > 969
909 > 99

TEACHER NOTES

Day 84

NUMBER TALK

BEFORE

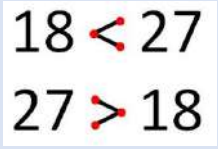
This slide has the String of expressions that you will use for today's Number Talk. You can use Smart Ink, right click for PowerPoint Pen, or convert this slide to Smart Notebook so you can easily annotate on the slide. The annotation is an important part of the routine. The expressions should be presented one-at-a-time with skills building on one another.

DURING

Comparing Numbers

This Number Talk is a little different than previous Number Talks. For this Number Talk, students will determine if a number is greater than, less than, or equal to another given number. As with all Number Talks, the goal is to help students to build their math oral language along with the deeper understanding of the content. Help students to learn how to read the mathematical symbols.

STRATEGY: Place dots on the ends of the symbols. The "greater number" will be near the side with the "greater number of dots". "Less dots" go near the number that is "less". If you place dots on the ends of the equal sign, notice that both sides will have 2 dots, which is an equal number of dots.



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, effective, and brain-friendly.

Information for you (not intended to be shared with your Gr.2 students): Avoid tricks that expire -- like telling students that the less than sign points toward the lower numbers on a number line – in middle school, students typically are asked to read the expression from the variable, so this trick longer works. Here's an example: 56 > x would be read "x is less than 56" since you read this one from right to left.

AFTER

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

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Day 84

NUMBER TALK

Compare these pairs of numbers.
How do you know which symbol to use?

499 ☐ 500

981 ☐ 969

909 ☐ 99

> is greater than

< is less than

= is equal to

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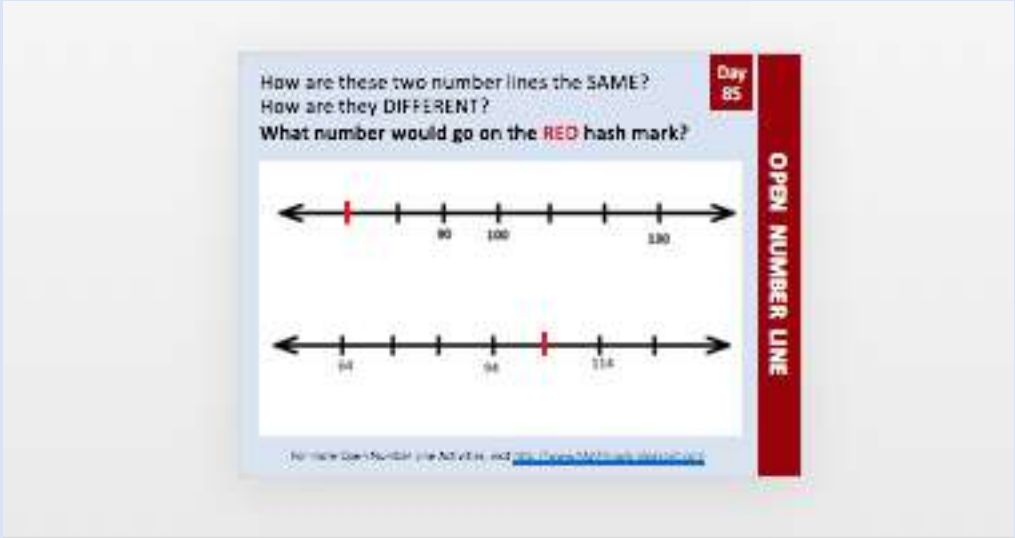
Use the NEXT SLIDE with students.

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

Day 85

OPEN NUMBER LINE



TOP: 70
BOTTOM: 104

SAME

- Both have intervals of 10
- Both have values greater than 100
- Both are increasing as they move to the right

- DIFFERENT
- They show different numbers on the hash marks
- The top one has multiples of ten with zero in the ones place. The bottom one have a 4 in the ones place.

For more Open Number Line Activities, visit http://www.MathSnack.blogspot.com

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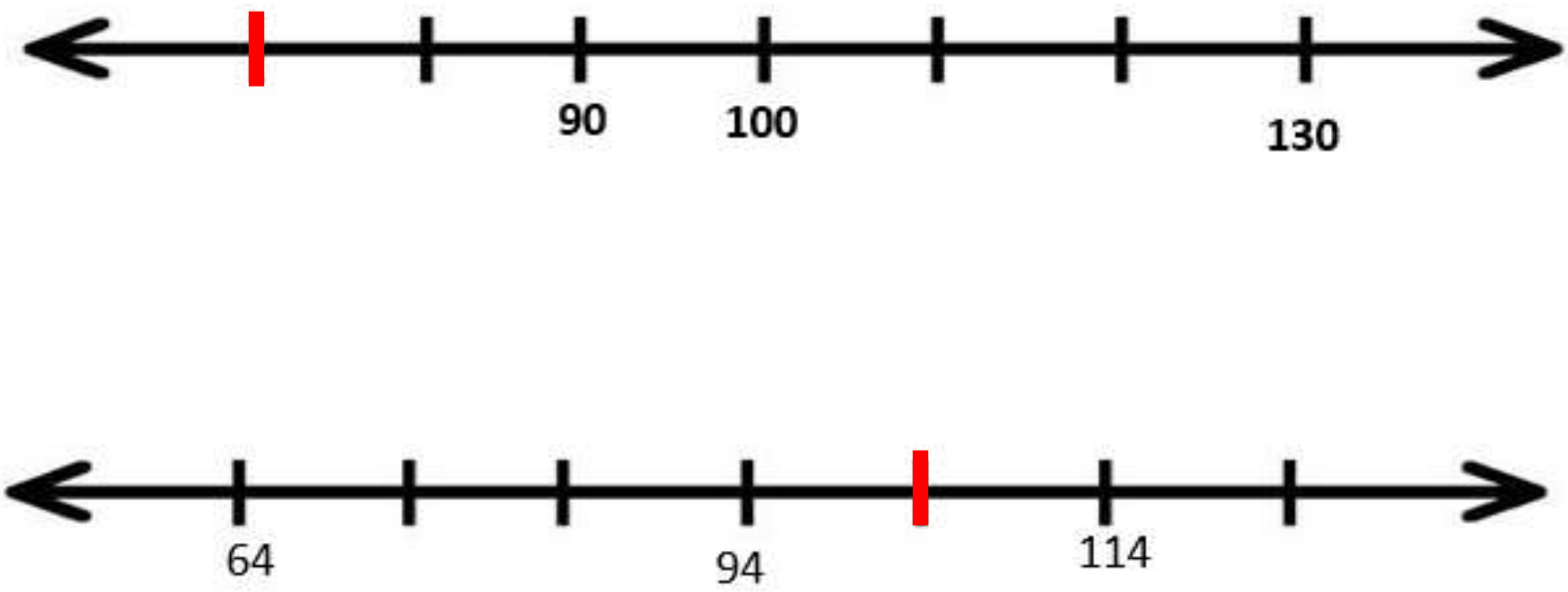
Day 85

How are these two number lines the SAME?
How are they DIFFERENT?
What number would go on the RED hash mark?



OPEN NUMBER LINE

For more Open Number Line Activities, visit http://www.MathSnack.blogspot.com

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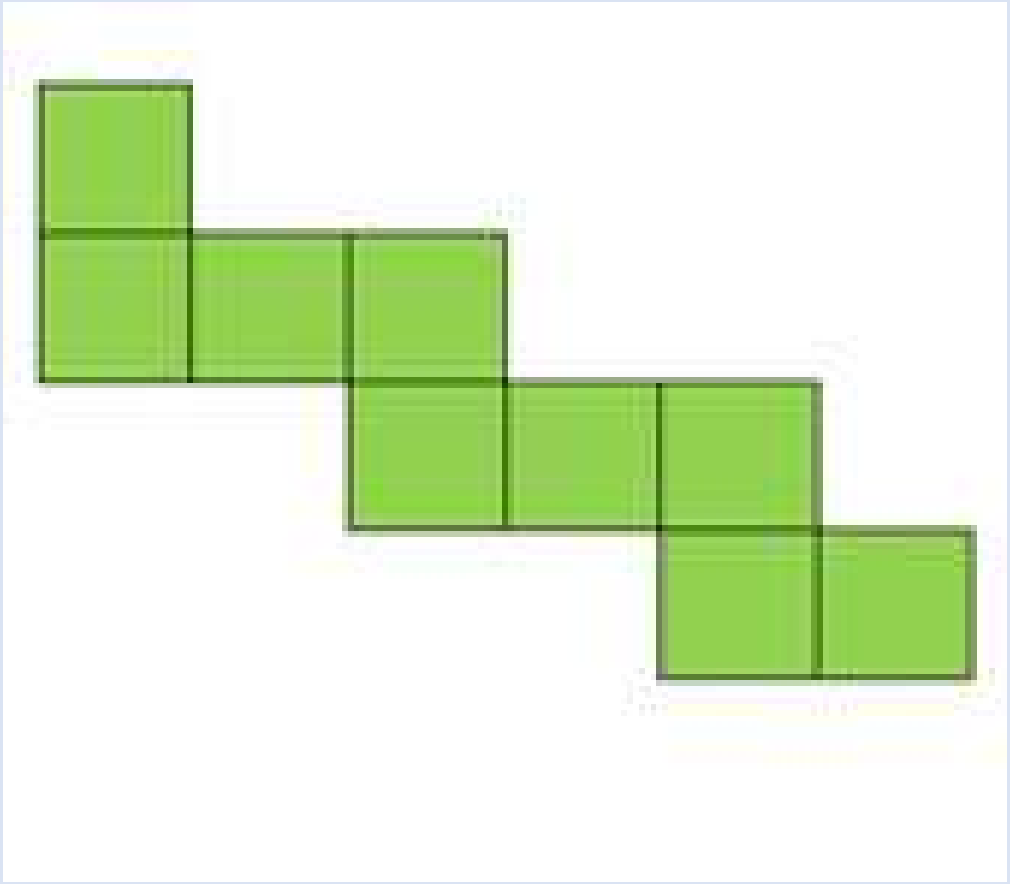
Directions for QUICK COUNT routines

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?



http://www.visualpatterns.org

QUICK COUNT

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Day 86

QUICK COUNT

What did you NOTICE?

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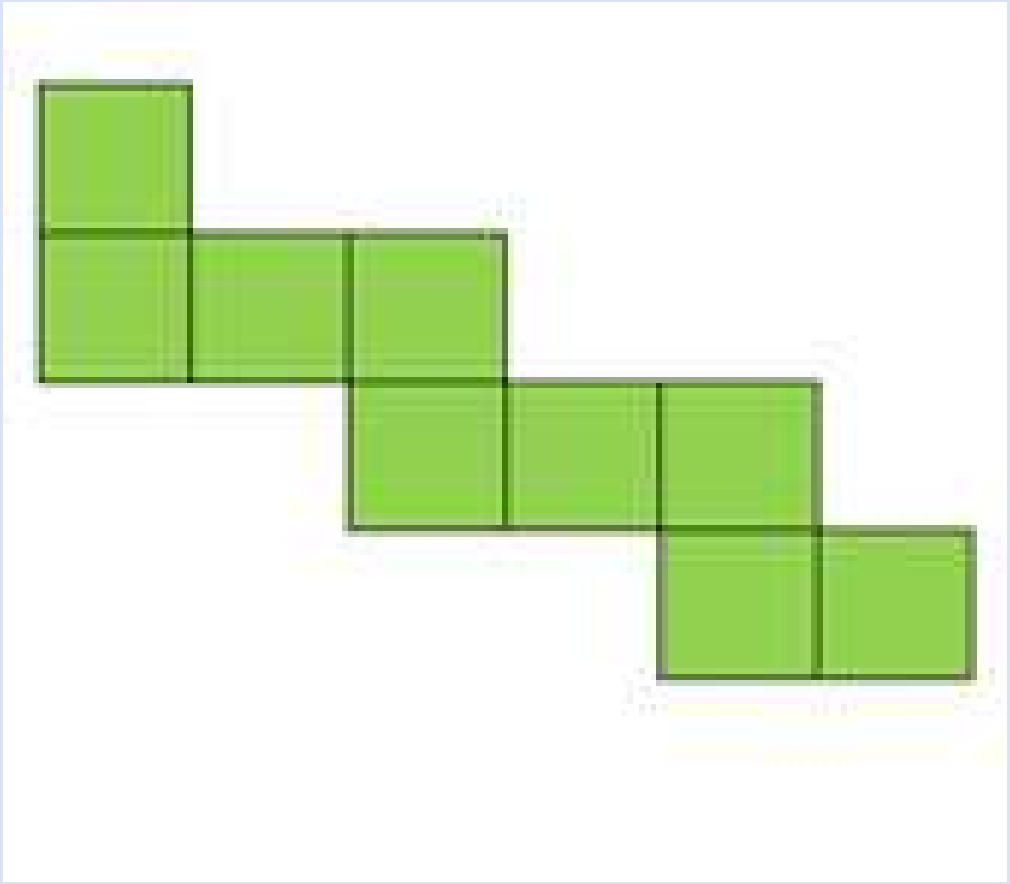
Day 86

How many do you see?
What counting shortcut did you use?



QUICK COUNT

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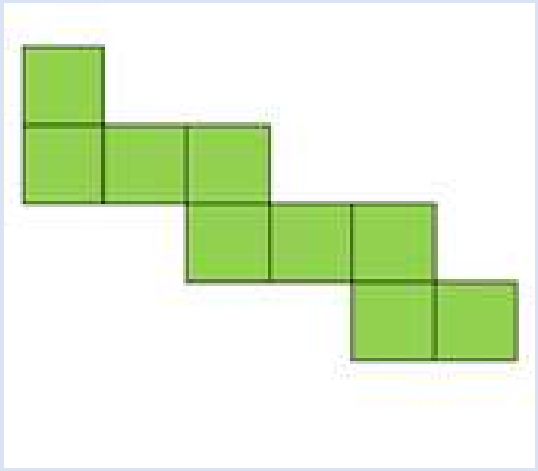
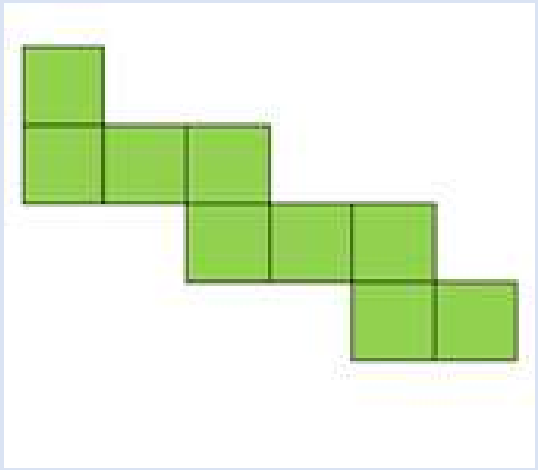
Day 86

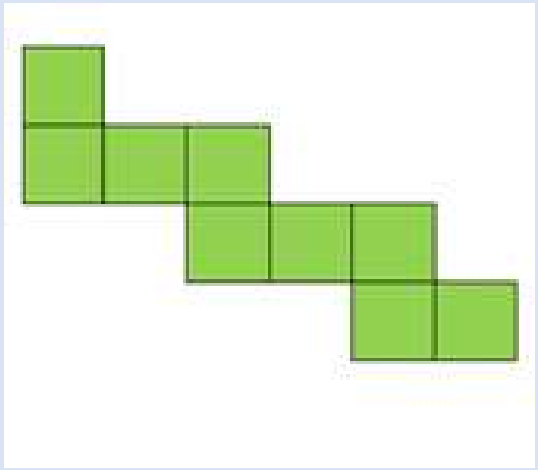
QUICK COUNT



(They) noticed ____ so they _____

I noticed ____ so I _____





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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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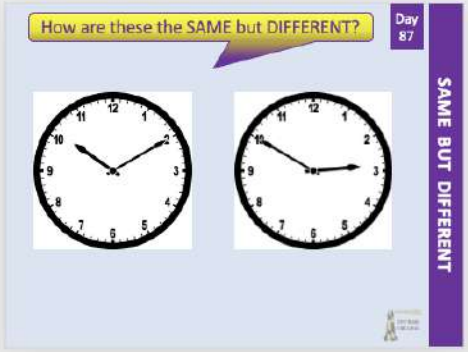
Use the NEXT SLIDE with students.

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

Day 87

SAME BUT DIFFERENT

- 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….”

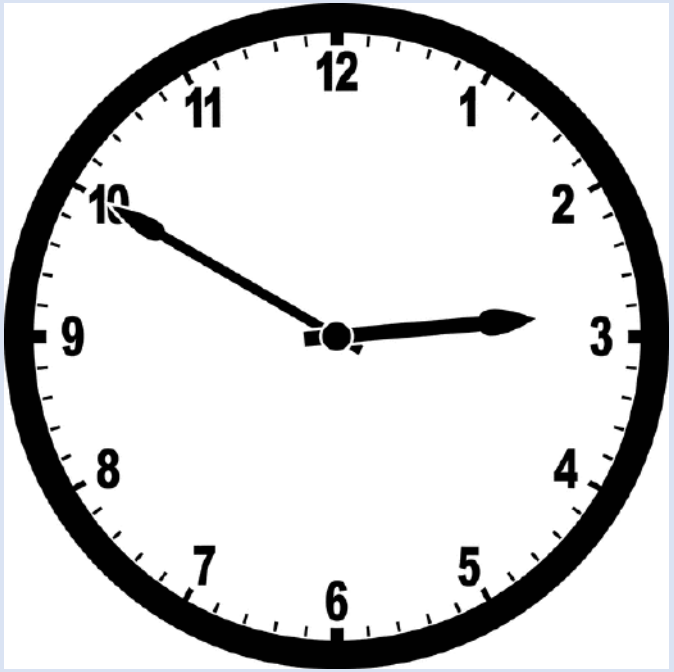


Possible Responses

- Both of the hands are close to the 2 and the 10, but the small and long hand are reversed on each clock
- The hands are in similar positions, but one clock says 10:10 and the other clock says 2:50
- Both are clocks
- Both are a time, but they are not the same part of the day.
- Both have an hour hand and a minute hand, but the hands are pointing to different times.
- Both clocks have one hand that is on the 10, but one clock it's the hour hand and the other clock is the minute hand
- Both have the numbers on the clock in the same order (notice how the clock only goes to 12 then starts back at 1 again)

How are these the SAME but DIFFERENT?

Day 87



SAME BUT DIFFERENT

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Day 88

SPLAT!

Directions for SPLAT! routines

SPLAT! is a number sense activity that was developed by an educator in Oregon. There are dozens of SPLAT! activities including SPLAT! within ten, multi-SPLAT!, colored SPLAT!, and fraction SPLAT!

In order for SPLAT! to work correctly, you will want to keep this activity in PowerPoint format.

To learn more about Steve Wyborney's Splat activity, click this link
http://www.stevewyborney.com/?p=893

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18

Day 88

SPLAT!

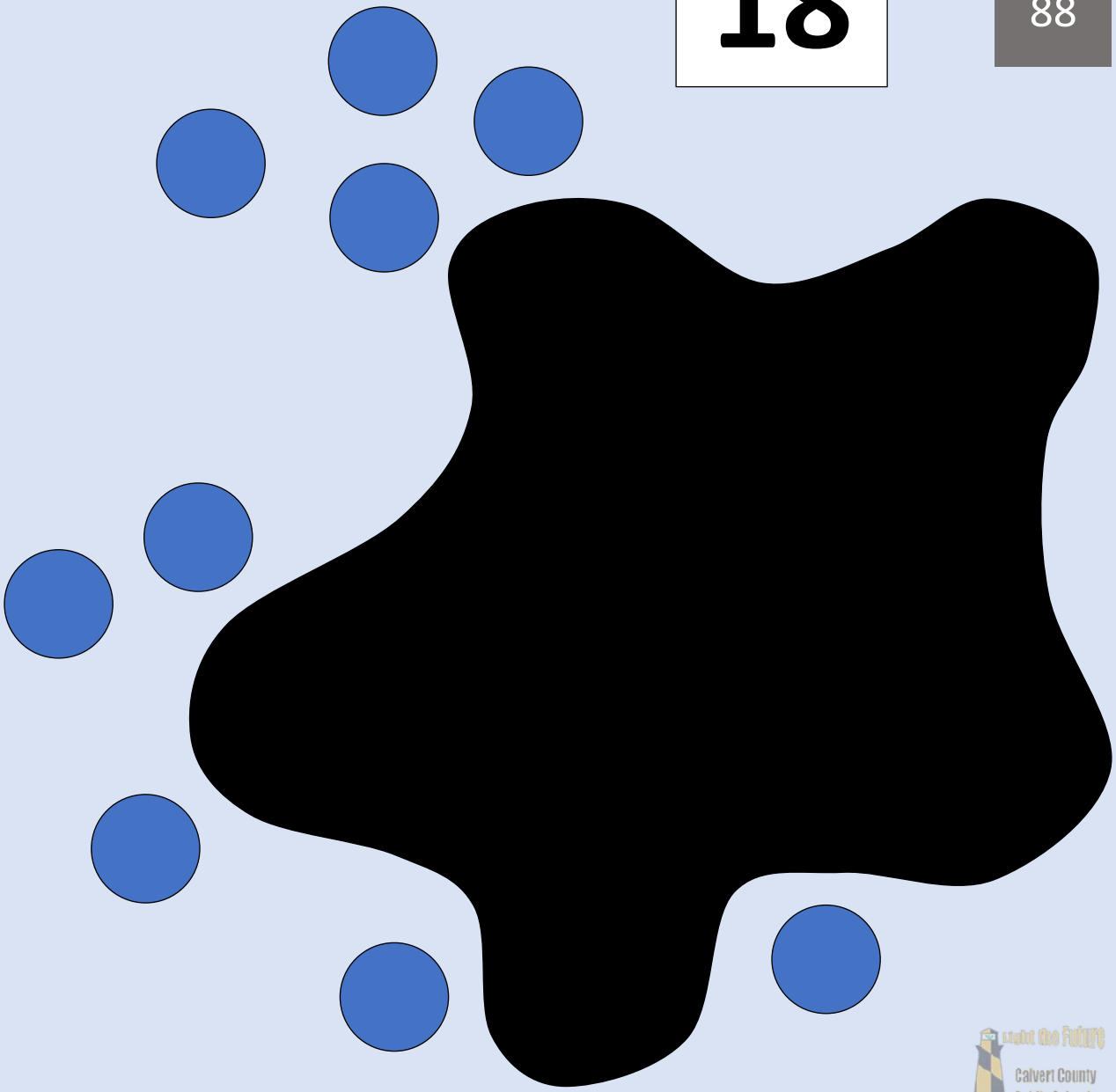
How did you count them?

…w many shapes are under the splat? How do

How else could you know?

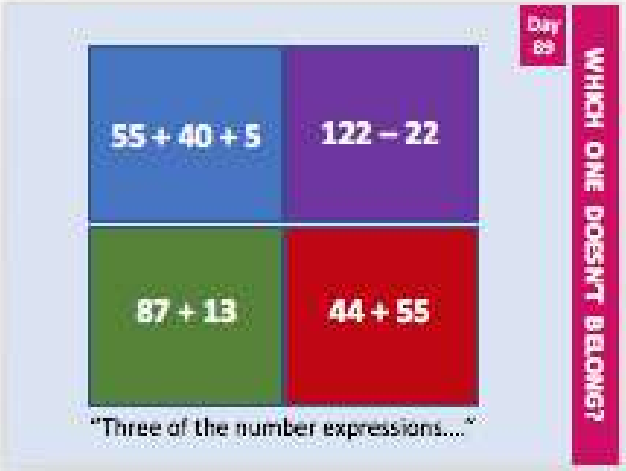
Let's look under the splat to see how many shapes

How did you count the dots under the splat?



Use the NEXT SLIDE with students.

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



- BLUE – Three of the expressions have 2 numbers in the expression.
  The blue box uses 3 numbers
- PURPLE – Three of the expressions are addition expressions.
  The purple box is a subtraction expression
- GREEN – Three of the expressions have a number with repeating digits (55, 22, 44).
  The green box does not have a number with repeating digits.
- RED – Three of the expressions equal 100.
  The red box does not equal 100, it equals 99

Day 89

WHICH ONE DOESN'T BELONG?

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Day 89

WHICH ONE DOESN'T BELONG?

55 + 40 + 5	122 – 22
87 + 13	44 + 55

"Three of the number expressions…."

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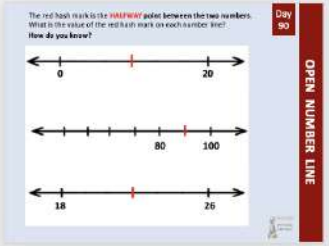
Use the NEXT SLIDE with students.

Day 90

TODAY'S GOAL: Since Day 90 marks the halfway point of the schoolyear, we will use our Number Sense Routine today to explore the concept of halves on the number line.

**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, we will focus our Number Talk today on HALF.



POSSIBLE STRATEGIES

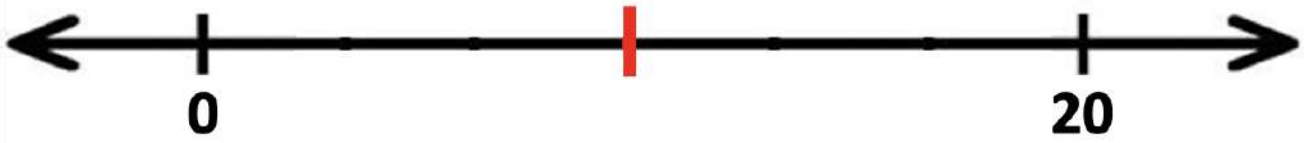
- 0-20
  - Halfway between 0 and 20 is 10. Some students may just "know" this information. Encourage students to convince you.
  - Students might show you their fingers and explain that if you have 10 fingers and 10 fingers that's 20 fingers so half of that would be 10 fingers.
  - Students might explain their reasoning by referencing a double tens-frame or a 20-bead Rekenrek that they explored in Grade 1
  - This example is designed as an easy access model to get students thinking about halves.
- 80 to 100
  - If you skip count by 10s, you say 80, 90, 100 so 90 is in the middle of 80 and 100
  - 80 is 20 away from 100, so half of 20 is 10 and 10 more than 80 is 90
- 18 to 26
  - When you count up from 18 to 26, there are 8 number between 18 and 26. Halfway would be 4 numbers. 4 more than 18 is 22
  - Ten more than 18 is 28. That is 2 too many, so 18 to 26 is only 8 spaces. Half of that is 4. Four less than 26 is 22

For more Open Number Line Activities, visit http://www.MathSnack.blogspot.com

OPEN NUMBER LINE

Day 90

The red hash mark is the **HALFWAY point between the two numbers**.
What is the value of the red hash mark on each number line?
How do you know?



OPEN NUMBER LINE

Day 91

Estimation Activity

A new type of Estimation FUN!

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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Before seeing the clues, estimate how many erasers are in the cup.

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.

*Esti-Mysteries will only work correctly in Slide Show mode of PowerPoint – select “Play from Current Slide”

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Clue #1

Count by 2's from 2 to 30. The answer is one of those numbers.

Clue #2

The answer is greater than 10.

Clue #3

The answer is less than 30.

Clue #4

One of the digits is a 4.

Clue #5

There are now two possibilities. Which one do you think it is?

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

The Reveal
Click to see the answer.

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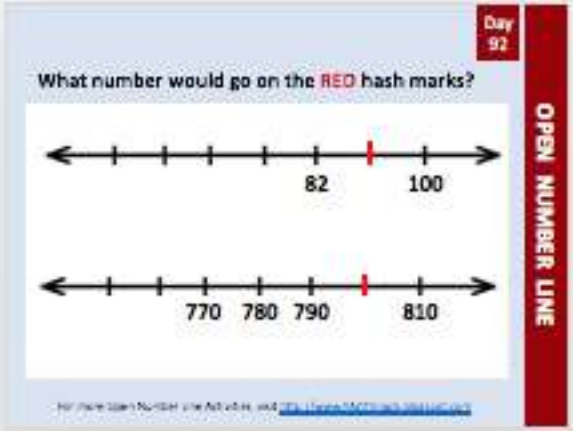
Use the NEXT SLIDE with students.

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

Day 92

OPEN NUMBER LINE



Possible Strategies

TOP:
Red Hash = 91
100 – 82 = 18 so half of 18 is 9. Add 9 to 82, subtract 9 from 100, or add ten and subtract 1 for an even more efficient strategy.

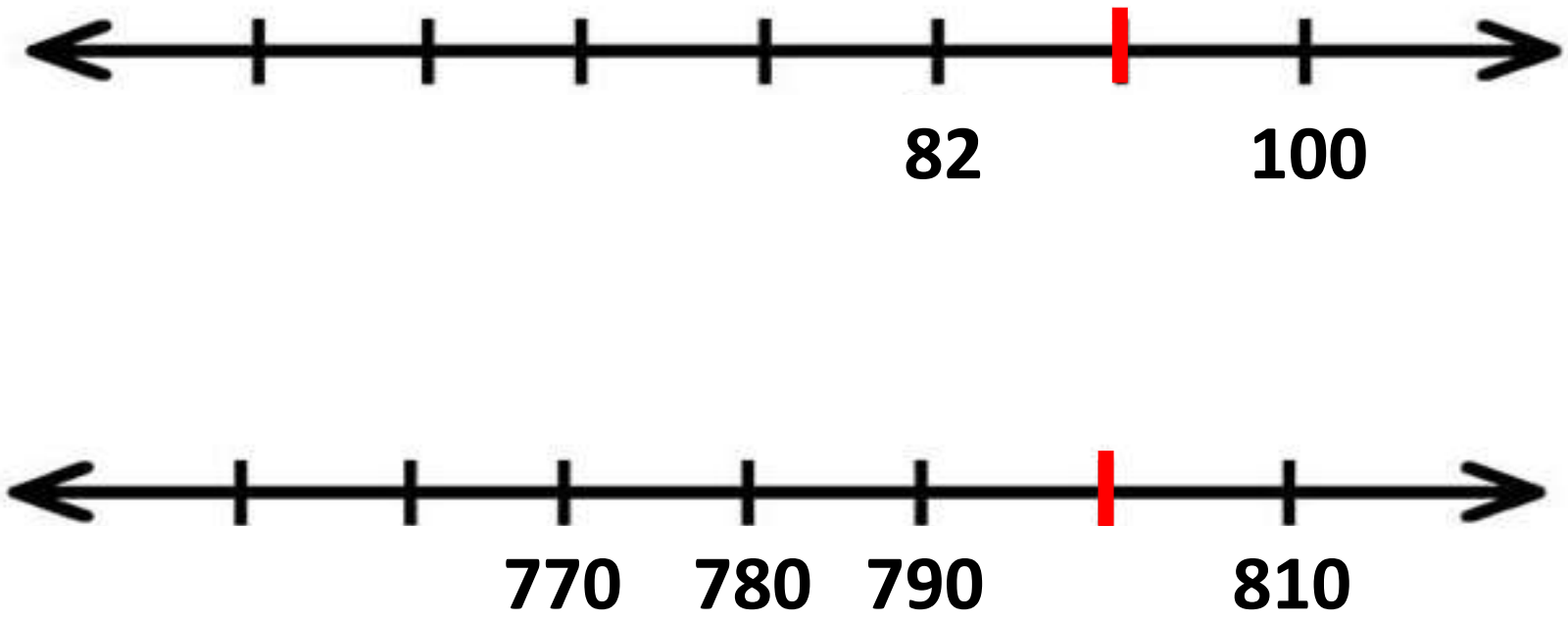
BOTTOM:
Red Hash = 800
The hash marks increase by 10 each time.
790 + 10 = 800
800 + 10 = 810

For more Open Number Line Activities, visit http://www.MathSnack.blogspot.com

Day 92

OPEN NUMBER LINE

What number would go on the RED hash marks?

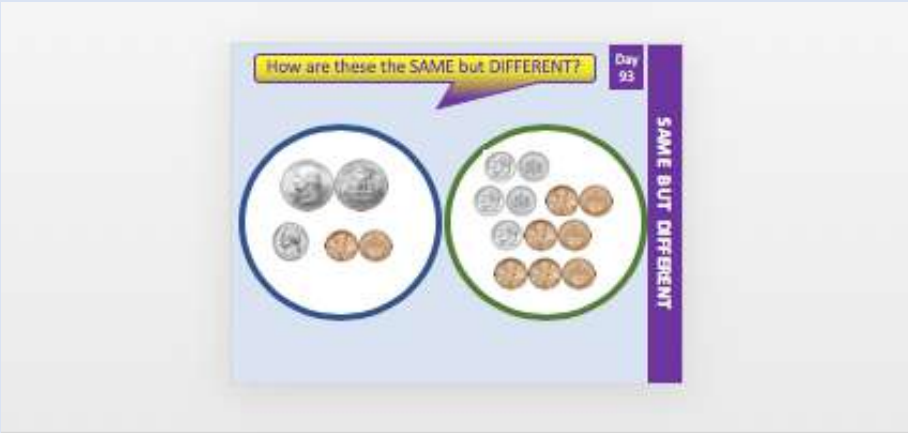


Day 93

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….”
- **Remember to give TIME & SPACE for students to think and discuss with partners.**



POSSIBLE RESPONSES

SAME
Both are money
Both use pennies
Both have a value of 57 cents
Both show the coins heads and tails up
Both show more heads up coins than tails up coins
Both use a set of mixed coins

DIFFERENT
The blue circle uses quarters and nickels. The green circle uses dimes.
The blue circle has 5 coins. The green circle has 12 coins.

SAME BUT DIFFERENT

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How are these the SAME but DIFFERENT?

Day 93

SAME BUT DIFFERENT

Calvert County Public Schools

Day 94

WHICH ONE DOESN'T BELONG?

Use the NEXT SLIDE with students.

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

Three of the sets of coins are equal to 10 cents. The quarters are not worth 10 cents.
Three of the sets of coins are silver-colored. The pennies are not silver colored.
Three of the sets of coins show the "tails" side of the coin. The nickels do not show the tails side, only the heads side.
Three of the sets of coins show multiple copies of the same coin. The dime set only shows one dime.

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Day 94

WHICH ONE DOESN'T BELONG?

quarters

pennies

nickels

dime

"Three of the sets of coins…"

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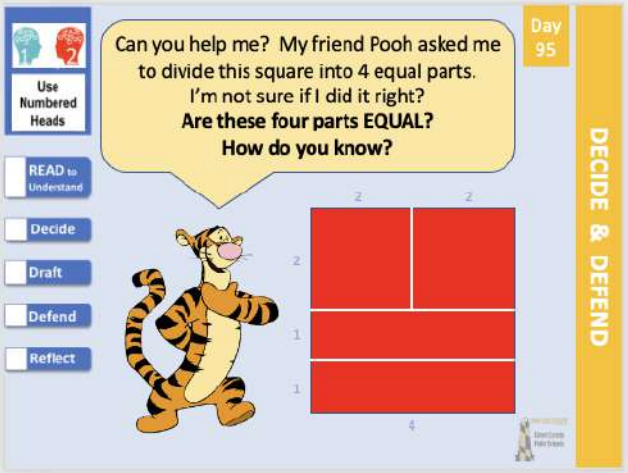
Use the NEXT SLIDE with students.

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



SOLUTION: YES, the four parts ARE equal. Young learners often believe the parts must look the same in order to be equal in area.

- The horizontal line across the middle divided the square into two equal parts.
- The numbers on the sides indicate the number of units long. These numbers are not provided to discuss area (area is a CCSS grade 3 topic), but rather, students should recognize that the two bottom rectangles are the same height as the top square and the long rectangle is equal to both of the short squares. Many students will not mention the numbers at all in their explanation and that is fine, too.
- The lower horizontal line divided the lower half into 2 equal parts.
- The vertical line divided the upper half into 2 equal parts.
- That makes each part of the square half of a half – or ¼ of the whole – which means all of the parts are equal in size even though their lengths and widths are not the same

Use Numbered Heads

READ to Understand

Decide

Draft

Defend

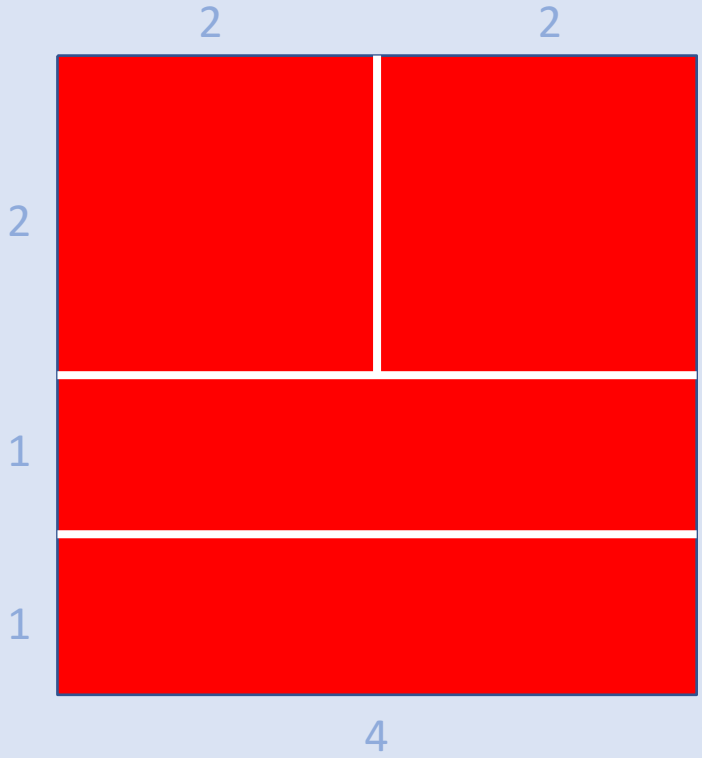
Reflect

Day 95

Can you help me? My friend Pooh asked me to divide this square into 4 equal parts. I'm not sure if I did it right?

Are these four parts EQUAL?

How do you know?



DECIDE & DEFEND

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Day 95

Reflect on Learning

- What was mathematically important in the problem?
- What new math idea did you learn today?

DECIDE & DEFEND

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4 + 7 + 2 + 6
16 + 9 + 4
57 + 34 + 6

Day 96

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

Adding up to four 2-digit numbers using strategies based on place value

This Number Talk is designed to help focus students to using place value strategies (such as Making Tens) to make adding up to four numbers in a way that is effective and efficient. 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. Focus the conversation on the strategies that effectively allowed students to group numbers together that Make Tens for easier mental calculations.

- 4+7+2+6 --- students should see that 4+6 make and easy 10
- 16+9+4 --- students should see that 16+4 works for quickly Making Tens
- 57+34+6 --- students should see that 34+6 works to quickly Make Tens

AFTER

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

Day 96

NUMBER TALK

$4 + 7 + 2 + 6$

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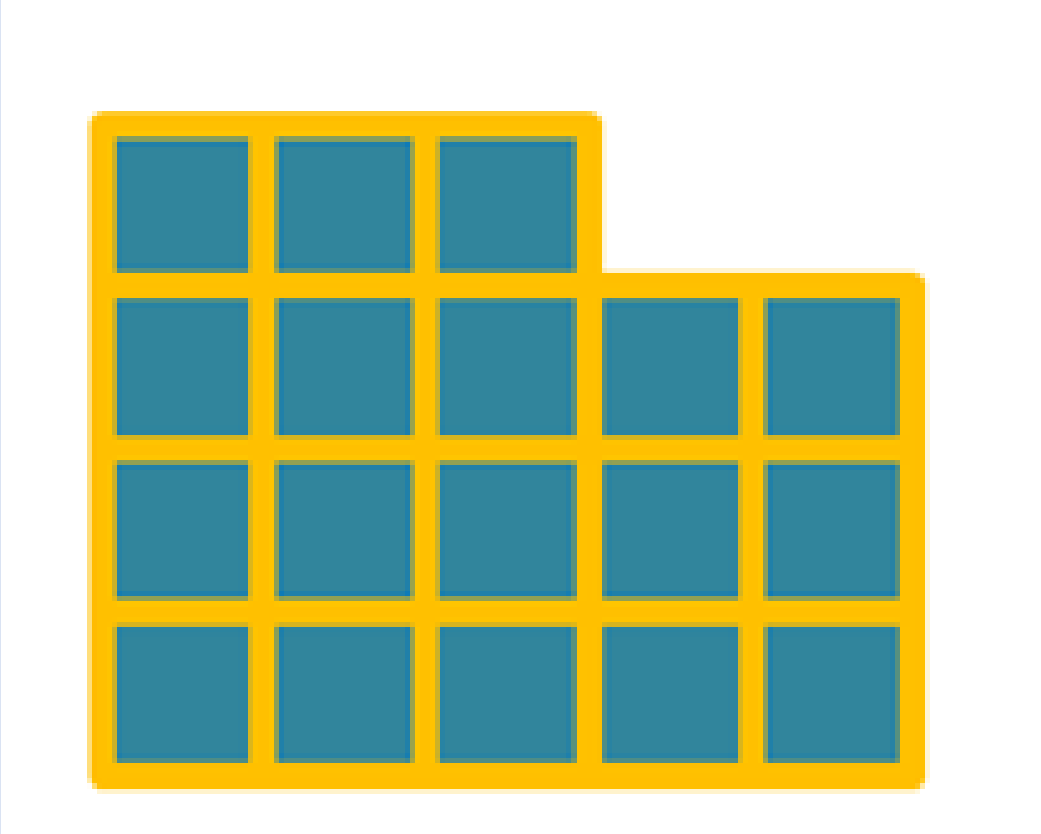
Day 97

What do you NOTICE?



QUICK COUNT

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Day 97

QUICK COUNT

What did you NOTICE?

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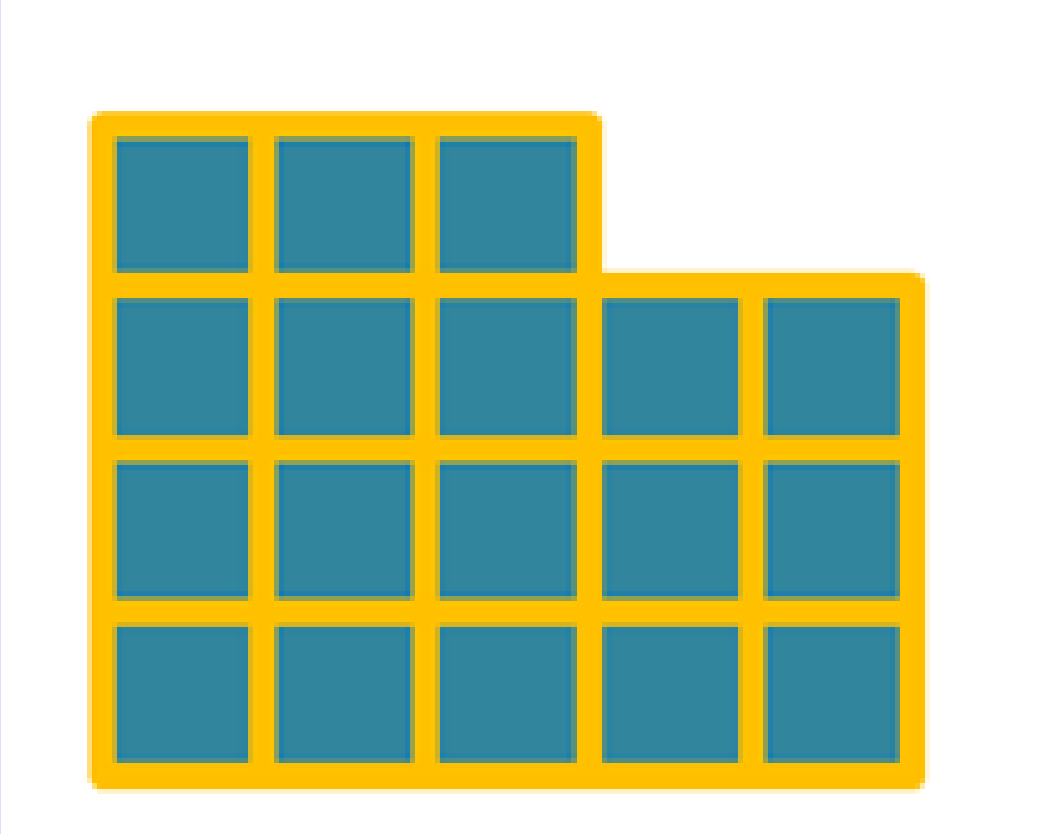
Day 97

How many do you see?
What counting shortcut did you use?



QUICK COUNT

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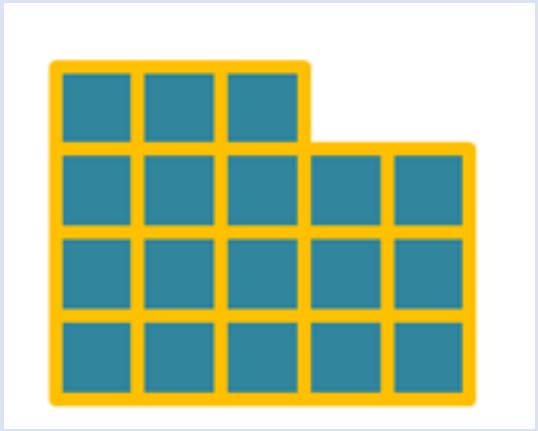
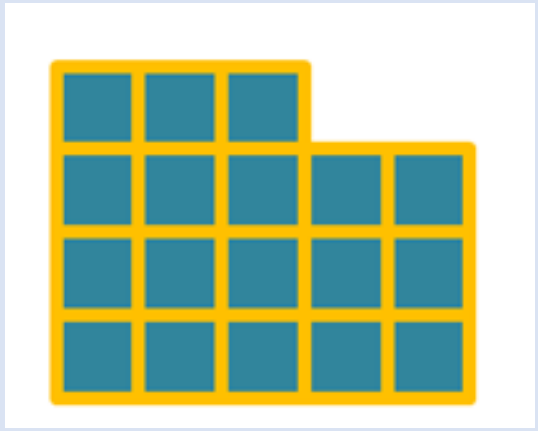
Day 97

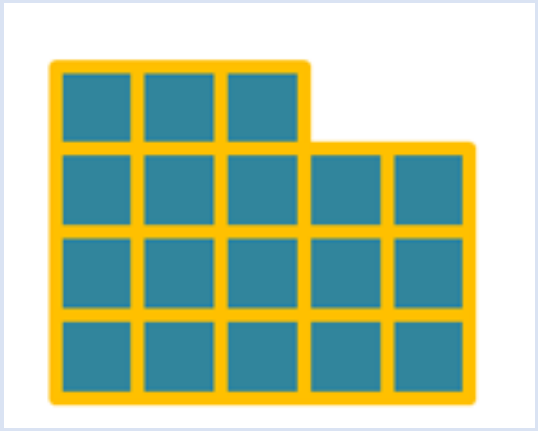
QUICK COUNT



I noticed ____ so I _____

(They) noticed ____ so they _____





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Day 97

Reflect

What was mathematically important?

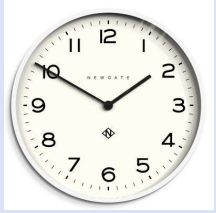
QUICK COUNT

Day 98

NUMBER TALK

3:00

11:05



1:50

TEACHER NOTES

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DURING

Telling Time

1. Show the clock on the slide
2. Ask students to silently determine the time. When they have an idea, they should put their thumb up in front of their chest just as we do for all other Number Talks to signal that they have an answer ready
3. After most students have a thumb up, call on a student to give his/her time idea – do not indicate whether s/he is correct or incorrect at this time. Simply write the time stated on the board using current digital time annotation (i.e. 3:00)
4. Ask, "Does anyone think it is a different time?" Call on any hands that raise. Record the new times on the board.
5. Continue this process until you have 3 responses (the correct one included) or there are no new answers (Let's say everyone agrees on the first answer given then you would only have 1 time written)
6. Ask someone to pick one of the times on the board and to defend "how they know" it is the correct time for the clock. Listen for correct math language. Ask questions to probe thinking as needed.
7. Continue in this way for each clock.

AFTER

After correctly identifying the times on each clock, end the discussion with a few broad generalizations that the students noticed:

- **The shorter hand tells the hours and is stated first**
- **The long hand tells the minutes and is stated second**
- **The hour hand must be ON or PAST the number in order for it to be that time (example 1:50 – the hour hand has not quite reached the 2, so we must still say 1 for the hour. Help students to recognize that when the clock is half-past (30 minutes), the hour hand will be half-way between two numbers as it moves closer to the next number.**

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Day 98

What time is it?

How do you know?

NUMBER TALK

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What time is it?

How do you know?

Day 98

NUMBER TALK

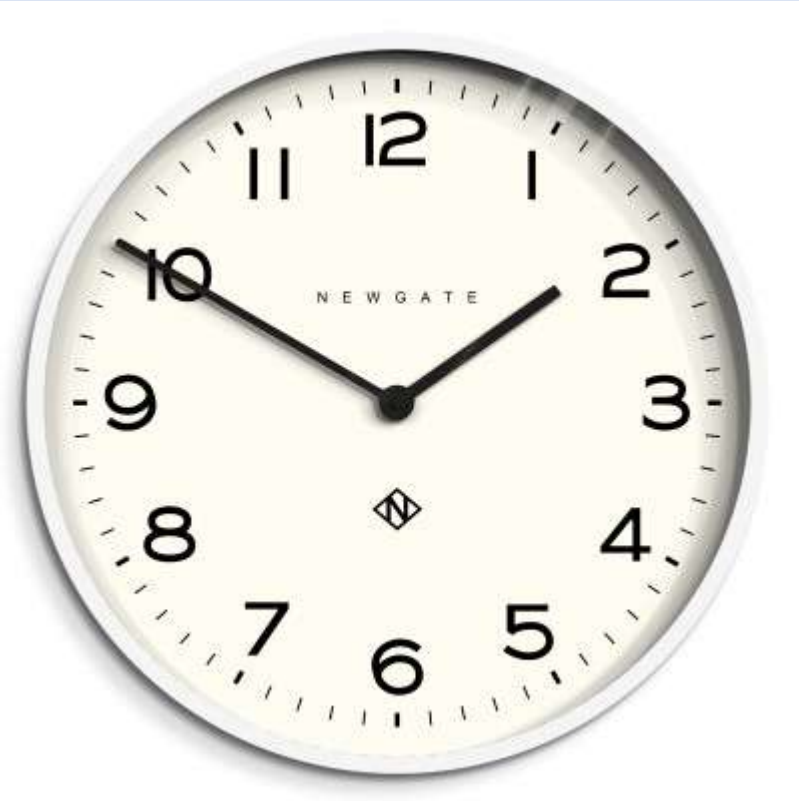
Calvert County Public Schools

What time is it?

How do you know?

Day 98

NUMBER TALK



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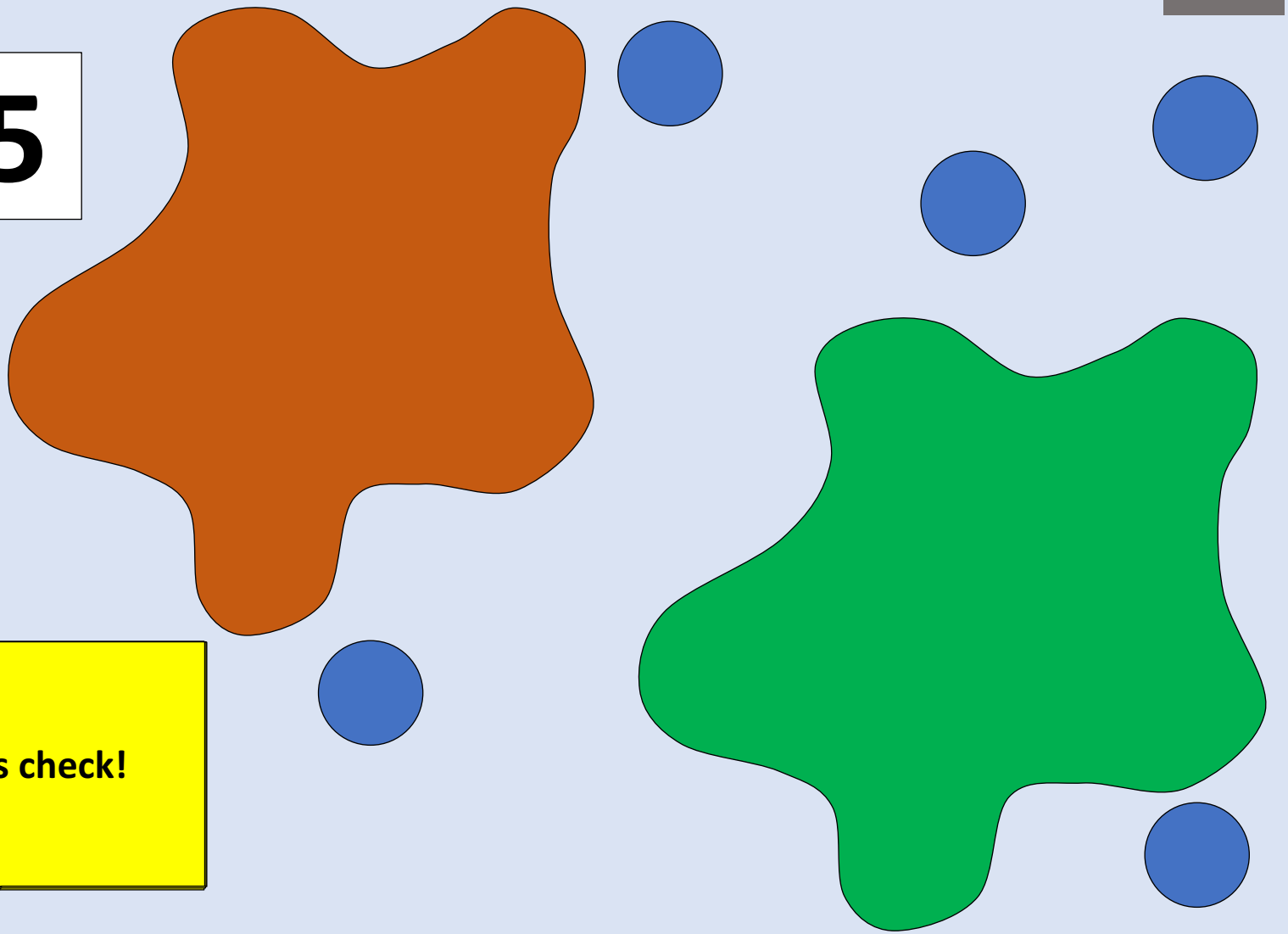
*Splats! that are different colors have different quantities of dots hiding.

Day 99

SPLAT!

15



Let's check!

33 + 17 + 50 **= 100**
12 + 30 + 38 + 20 **= 100**

Day 100

NUMBER TALK

TEACHER NOTES

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DURING *(a few of the possible strategies)*
33+17+50 33+7=40 then 40+50=90 then 90+10 (from the 17) = 100
33+17+50 30+10+50=90 then add the ones 3+7+0=10 90+10=100

12+30+38+20 30+20=50 38+2 (from the 12)=40 50+40=90 90+10 (from the 12)=100
12+30+38+20 12+30=42 38+20=58 58+2+40=60+40=100
12+30+38+20 10+30+30+20=90 2+0+8+0=10 90+10=100

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 and how using place value strategies help to mental calculations quickly and accurately

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Day 100

Each expression below equals 100.
Explain an efficient strategy to prove it.

33 + 17 + 50 **= 100**

NUMBER TALK

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