180 Days of
Number Sense Routines
Grade 1
Days 1-20

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.

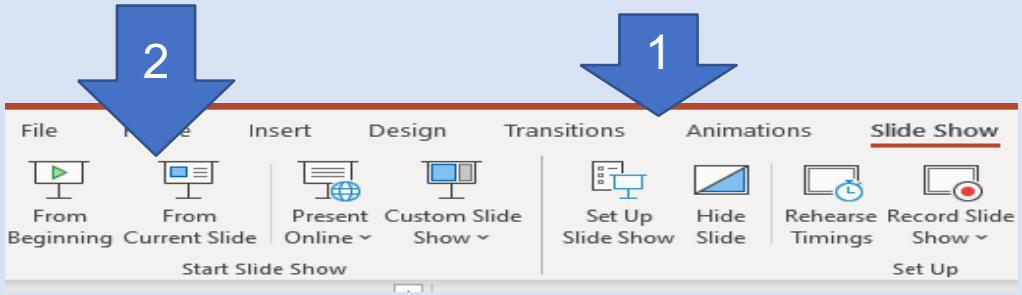
WHAT ARE THE CCPS IMPLEMENTATION EXPECTATIONS? Number sense routines have been developed for all 180 instructional days in grades 1-5. These routines are to be used every day, including early dismissal, late arrival, and field trip days. Because the routines do not require a specific order, it is permissible 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>

TROUBLESHOOTING:
These slides were created using the font **Calibri**. For formatting problems, check the font translation.

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 OER materials. We have made our work available in Open Educational Resources so that others may benefit as we have from the collaboration of other educators. 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
- *As Close As It Gets* https://www.mathisfigureoutable.com/ascloseasitgets by Pam Harris

Directions for SPLAT! routines

SPECIAL NOTE for Days 1-20: During the first 20 days, the same routine is presented two days in a row. The first day is designed to help students learn the protocols of the routine, so go slow and allow time and space for students (and you) to learn the protocols and how to engage with the routine. When the routine is repeated the next day using a different prompt, students should have a higher level of comfort that will enable them to engage with the mathematics and the math discussion more fluidly and deeply.

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, you must keep this activity in PowerPoint format.

To learn more about Steve Wyborney's Splat activity, click this link http://www.stevewyborney.com/?p=893 then scroll down the webpage to see the video link for SPLAT!

A KEY component of SPLAT! is to discuss COUNTING STRATEGIES. How can we count the dots efficiently instead of counting them one by one?

How many blue

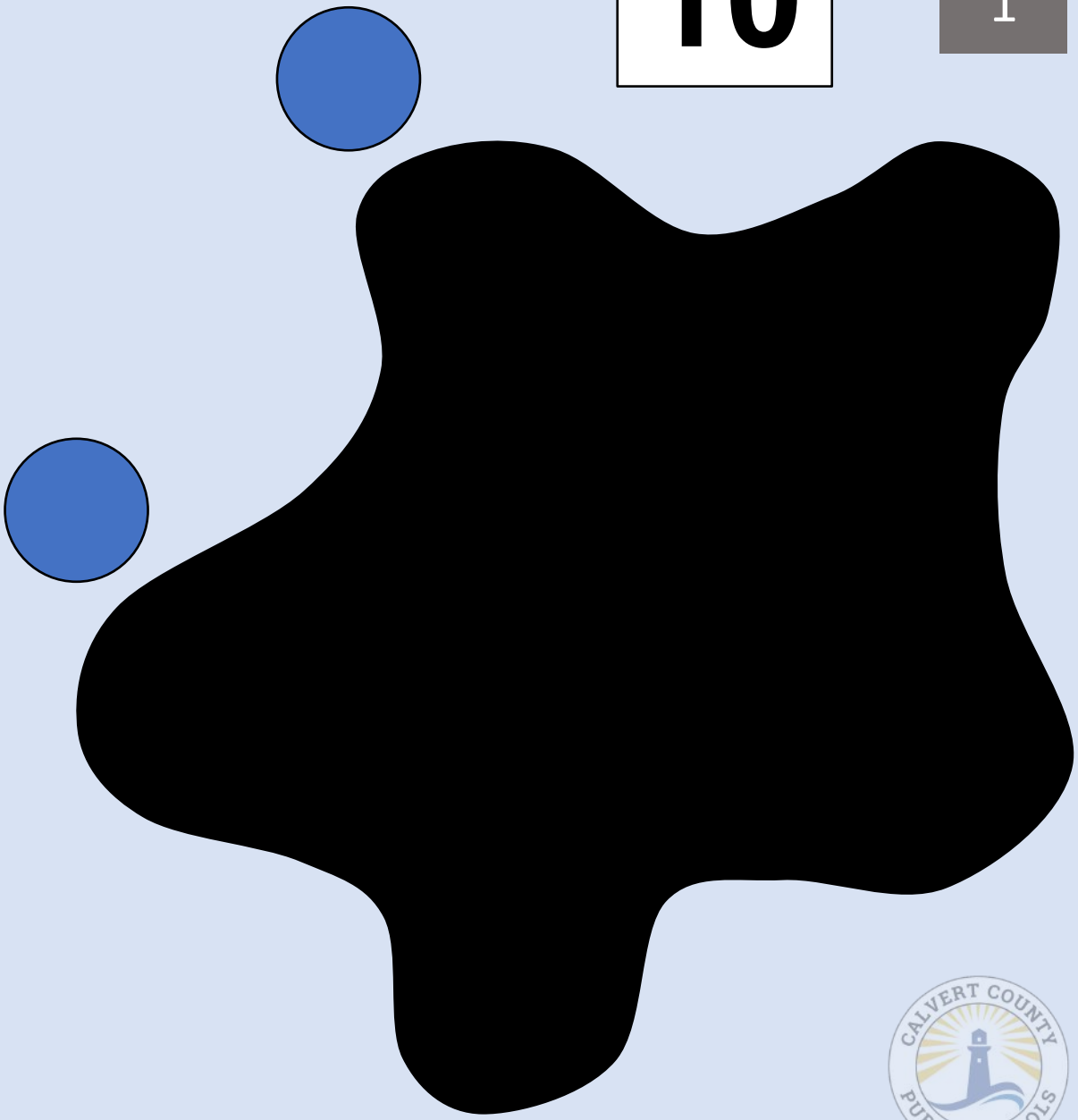
How did you count them?

[illegible] shapes are under the splat? How do

How else could you know?

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

What can we learn from this picture?



10

Day 1

SPLAT!

1.OA.B.4

How many blue shapes do you

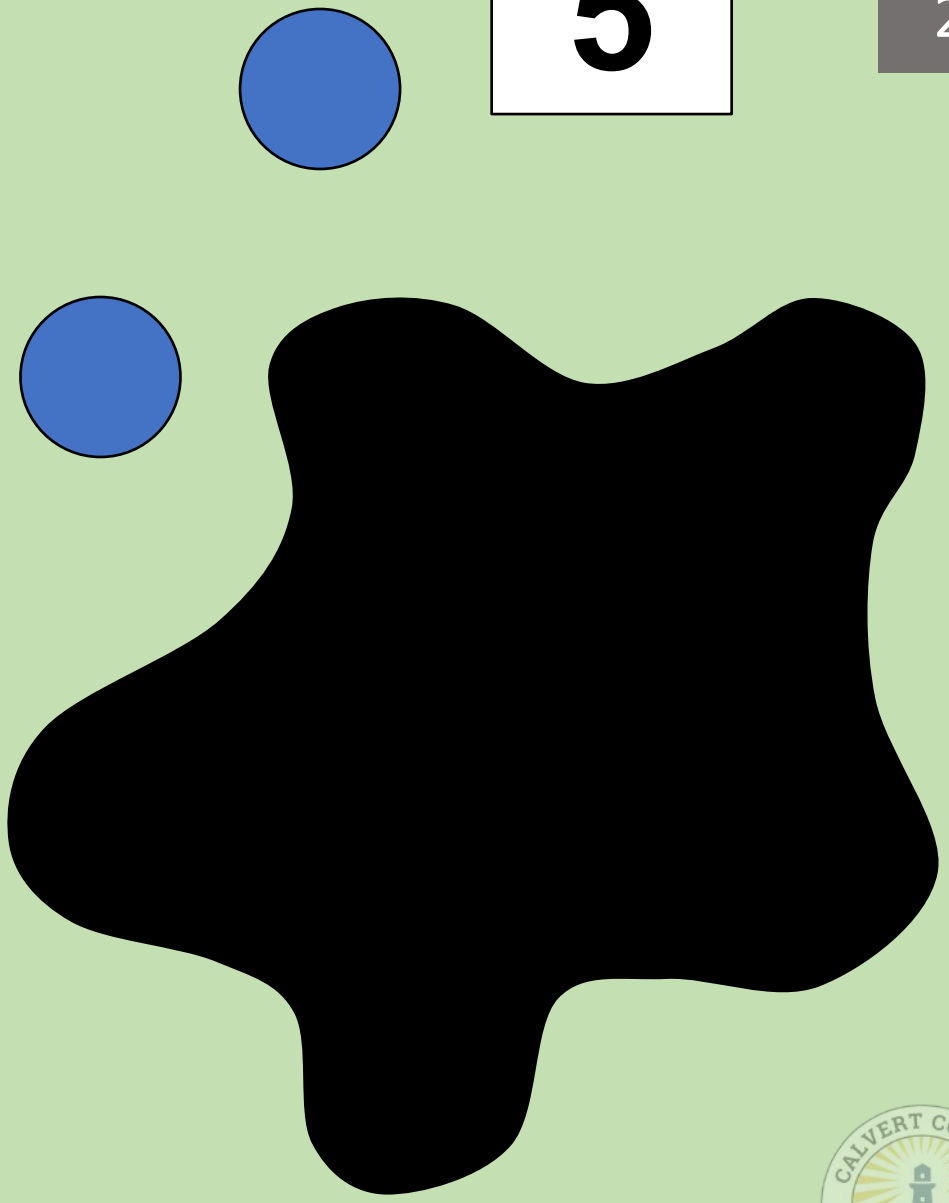
Splat!

How many shapes are under the splat? How do

How else could

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

What can we learn from this picture?



5

Day 2

SPLAT!

1.OA.C.6

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

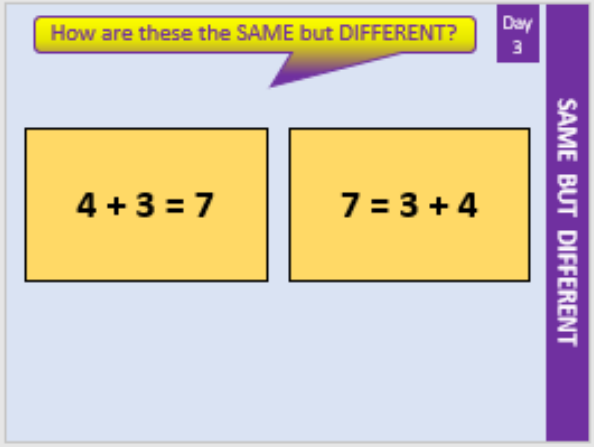
1. Present the slide
2. Ask students to THINK about how the two items are both the SAME AND DIFFERENT.
3. Do not allow conversation at this time -- give ample think time for students to consider the possibilities
4. After some time has been given (a minute or so), ask students to talk with their Number 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.

Day 3

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 same fact family: 3, 4, 7
- Both are addition problems
- Both equal 7
- Both have an equal sign and plus sign
- Both have 3 numbers

DIFFERENT
- The 7 is on different sides of the equal sign.
- One is 4+3 the other is 3+4
- One has two numbers on the left; the other has two numbers on the right side.

SAME BUT DIFFERENT

How are these the SAME but DIFFERENT?

Day 3

SAME BUT DIFFERENT

$4 + 3 = 7$

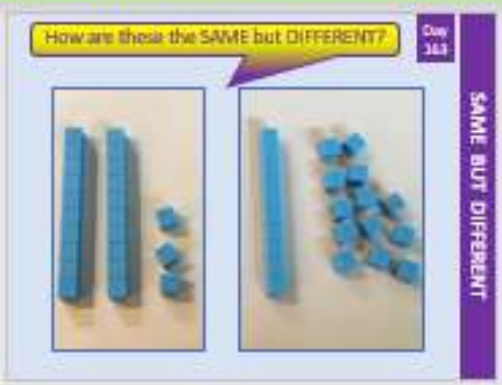
$7 = 3 + 4$

Day 4

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 have a value of 23
- Both use Base Ten Rods and Unit Cubes
- Both have at least 1 ten rod
- Both have at least 3 unit cubes

DIFFERENT

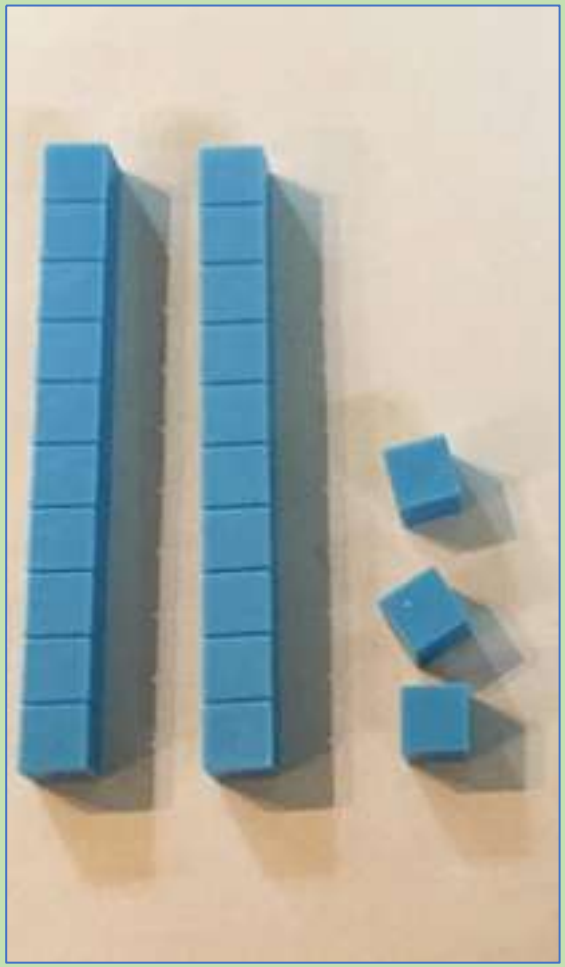
- The first is 20 + 3 while the second is 10 + 13
- The first has 2 tens and 3 ones while the second has 1 ten and 13 ones

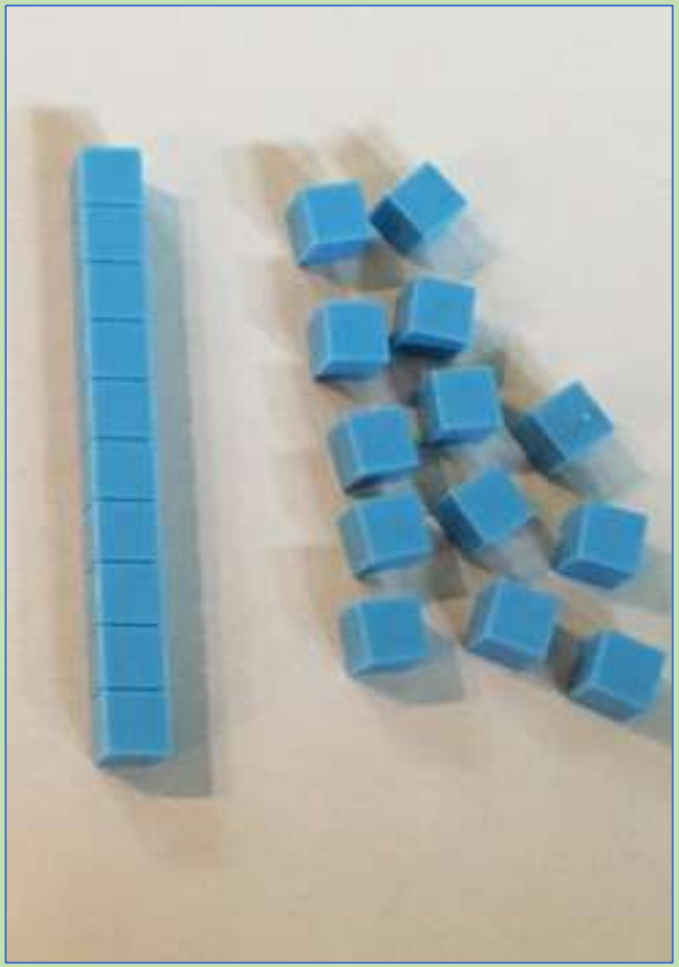
SAME BUT DIFFERENT

CALVERT COUNTY PUBLIC SCHOOLS

How are these the SAME but DIFFERENT?

Day 4





SAME BUT DIFFERENT

1.NBT.B.2

Directions for QUICK COUNT routines

Intro

QUICK COUNT

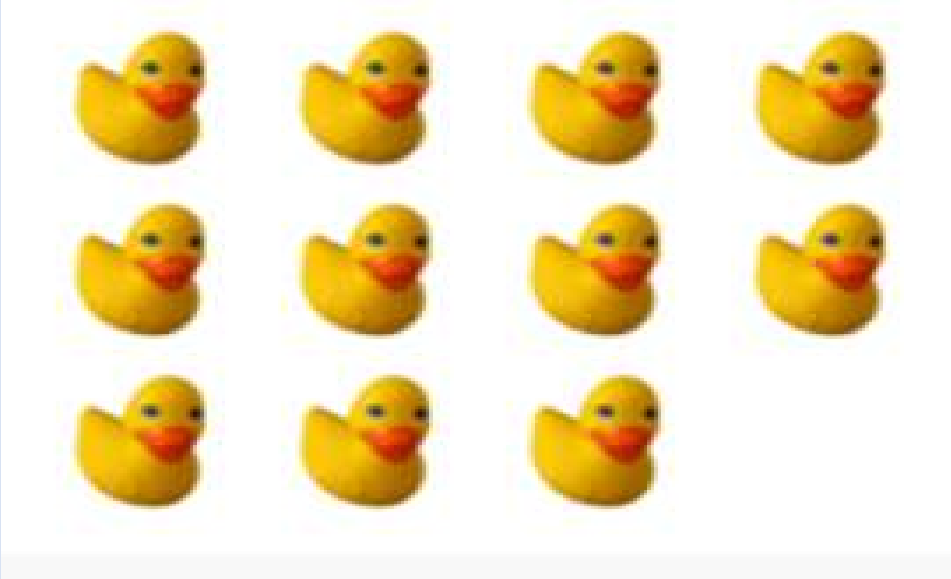
Quick Count is an instructional routine designed to shift attention away from mindless calculations and toward necessary structural interpretations of mathematics. This routine fosters structural thinking, Math Practice 7, and promotes student discourse.

Pair students into Numbered Heads (or Peanut Butter Jelly partners, etc.)

1. Show students the first image slide for about 3-5 seconds depending on the complexity of the image and level/experience of the students.
2. With their partner, students discuss everything they can remember about the image.
3. After a minute of partner discussions, have students share ideas to the group.
4. Create a list of student ideas that students can refer to when the image is shown again.
5. 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…)
6. Show the image again and leave it displayed as students look for counting shortcuts.
7. 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.
8. 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.
9. End by asking students to explain what was "mathematically important"

CALVERT COUNTY PUBLIC SCHOOLS

Day 5



What do you NOTICE?

QUICK COUNT

1.NBT.B.2

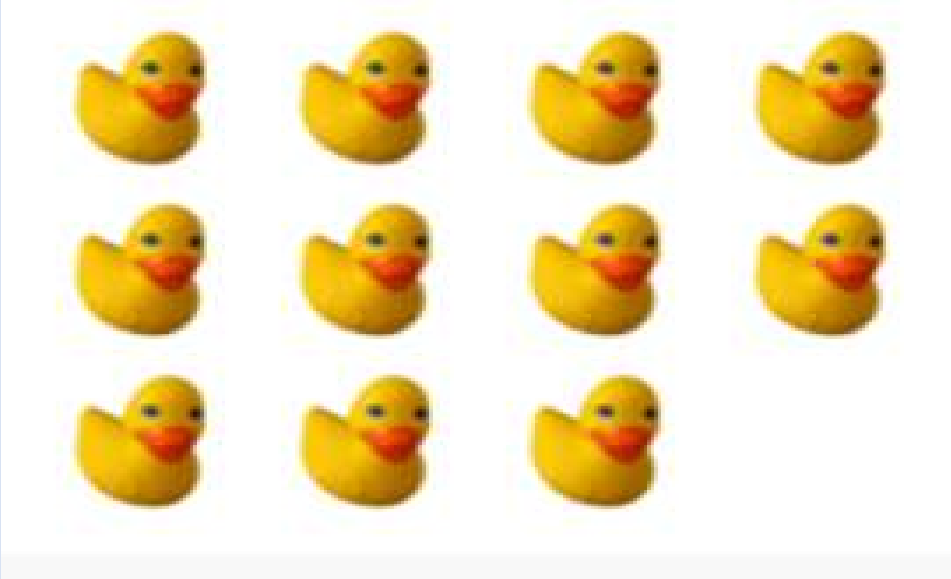
Day 5

QUICK COUNT

What did you NOTICE?

Day 5

QUICK COUNT



How many do you see?

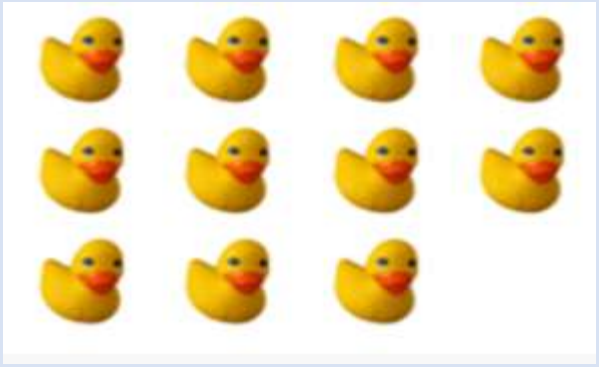
What counting shortcut did you use?

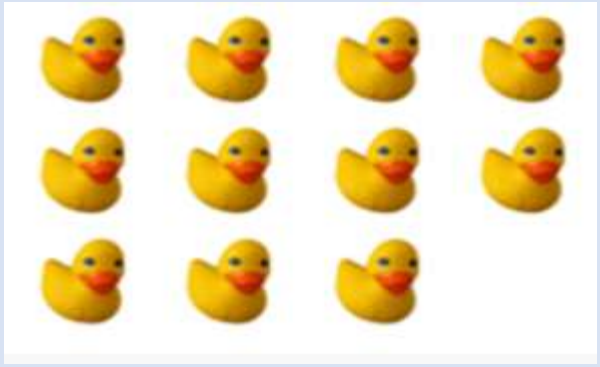
I noticed ____
so I _____

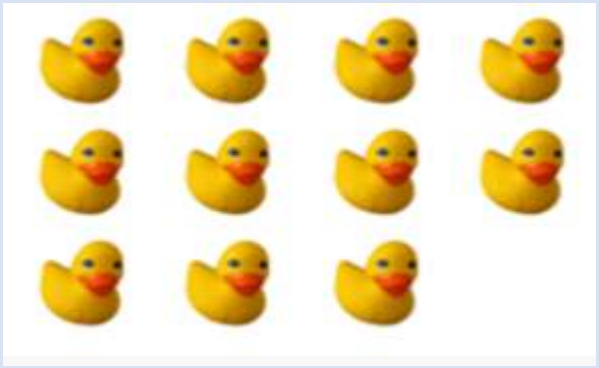
(They) noticed ____
so they___

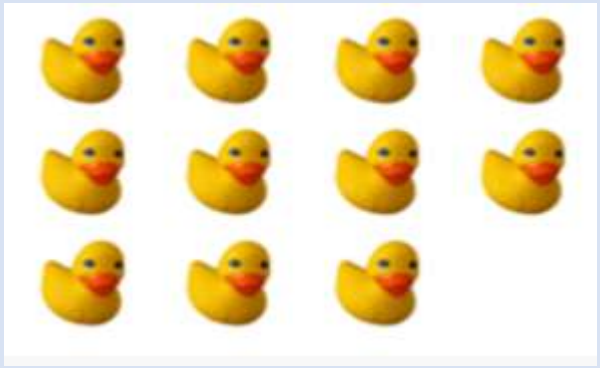
Day 5

QUICK COUNT









Day 5

Reflect

What was mathematically important?

QUICK COUNT

Day 6

What do you NOTICE?

QUICK COUNT

1.OA.C.6

Day 6

QUICK COUNT

What did you NOTICE?

Day 6

QUICK COUNT

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

I noticed ____
so I _____

(They) noticed ____
so they___

Day 6

QUICK COUNT

Day 6

Reflect

What was mathematically important?

QUICK COUNT

Day 7

Esti-Mystery

Estimation Activity with clues!

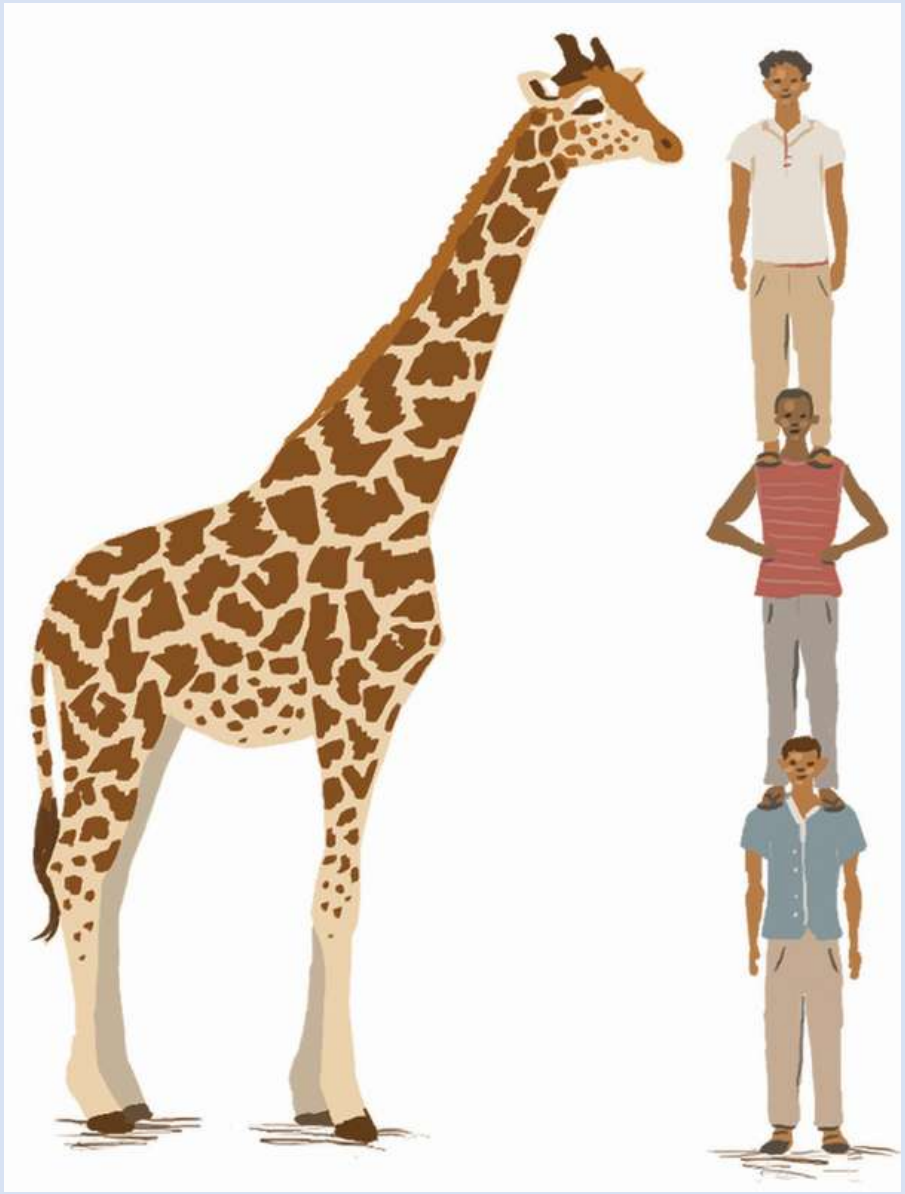
Students use clues to solve the estimation mystery.
After all of the clues are revealed, students will have enough information to determine if their initial estimate was correct.

Clues are revealed one at a time with time to discuss and refine original estimates after EACH clue is revealed.
No one should be stuck with their original estimate – encourage mindful refinements.

Students may benefit from using paper and pencil to work through possibilities or consider creating a class chart where possibilities are added and crossed off as each clue is revealed.

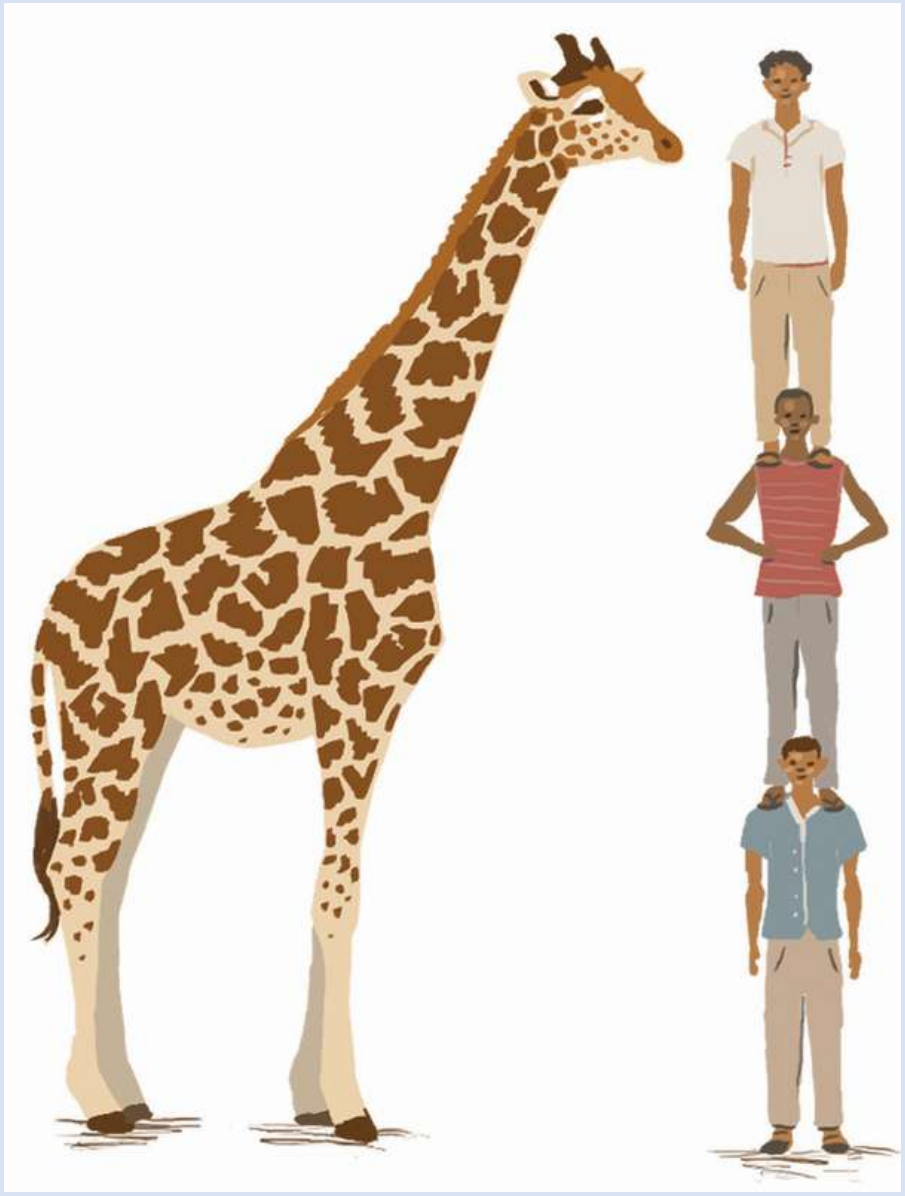
ESTIMATION

CALVERT COUNTY PUBLIC SCHOOLS



How tall is this giraffe?

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.



Clue #1

The tallest giraffe in the world was 19 feet tall.

Clue #2

His name was George.
This giraffe is not George.

Clue #3

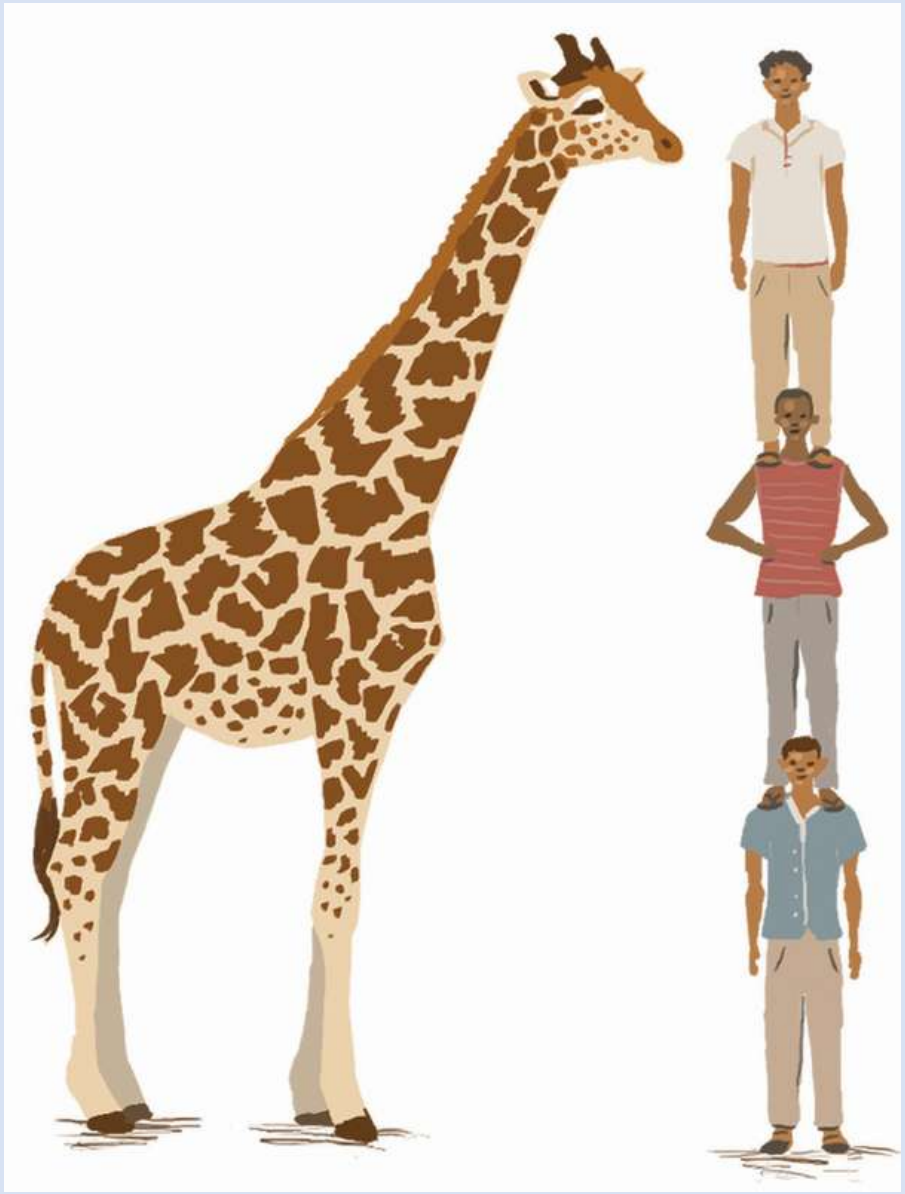
Newborn giraffes are 6 feet tall.

Clue #4

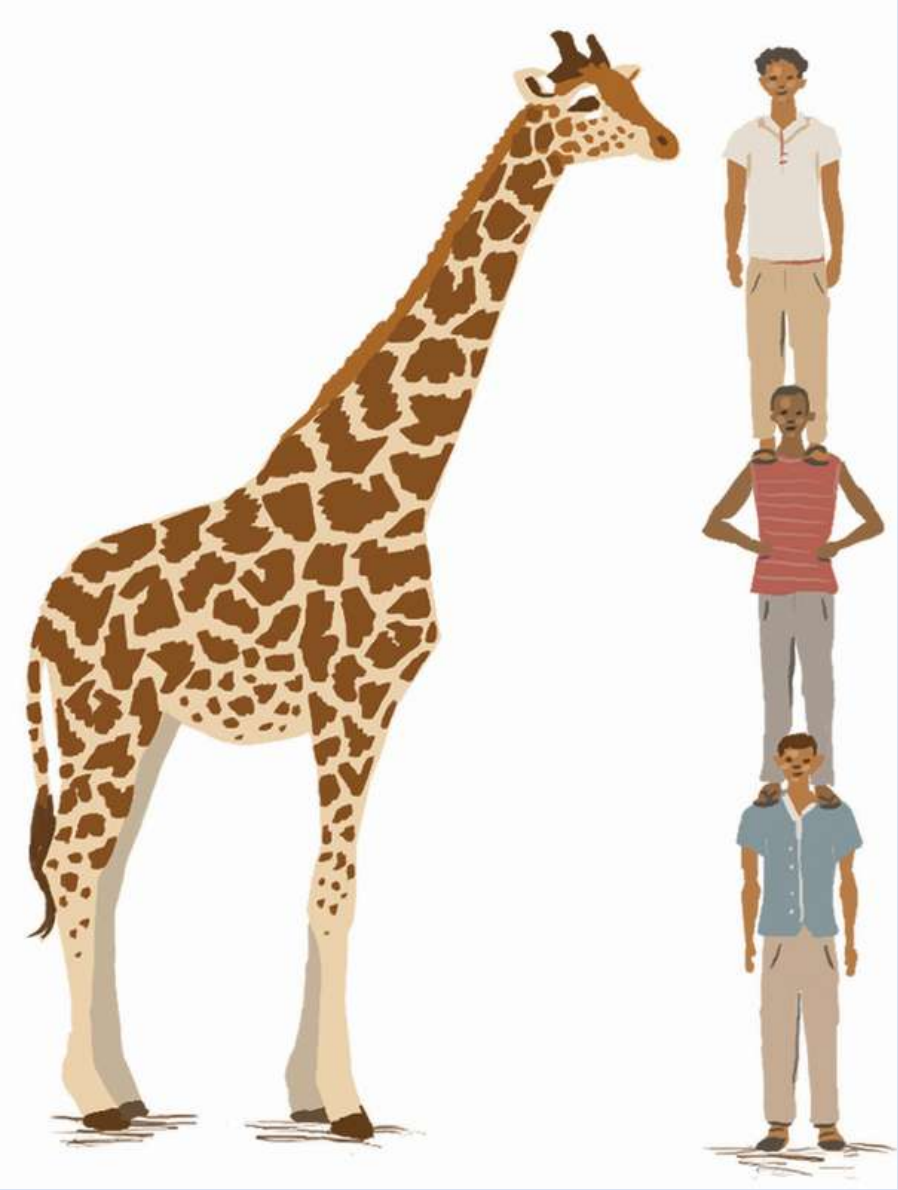
This giraffe is not a newborn.
He is 4 years old.

Clue #5

These men are each the same height as a newborn giraffe.



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



The Reveal
Click to see the answer.

Teacher Note: Students may notice that the two of the men's head and legs overlap which will reduce the overall height. But students may also mention that the giraffe's neck is not as straight upward as it could be. This would be a good opportunity to discuss real-world mathematical estimates.

Day 8

How many pencils?

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 want to use paper and pencil to keep track of the possible solutions.

1.R.4
K.CC.A.1

Clue #1

There are more than 10

Clue #2

There are less than 40

Clue #3

If you skip-count by 10s, you will say the number

Clue #4

You should have just 2 possible answers. What are they?

Clue #5

Which number do you think tells how many pencils? Why?

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

The Reveal
Click to see the answer.

Rationale, Goals, and Directions for OPEN NUMBER LINE routines

Intro

OPEN NUMBER LINE

Rationale

The Number Line contains number values that continue without end in both directions. It is not until Grade 6 that we introduce students to negative numbers. Even so, a number line that begins at 0 and continues beyond 1,000,000 is much too large of a tool for us to make practical use. For this reason, we introduce students to the Open Number Line which offers greater flexibility and helps to develop student Number Sense.

Goals

The Open Number Line will build student understanding in the following areas:

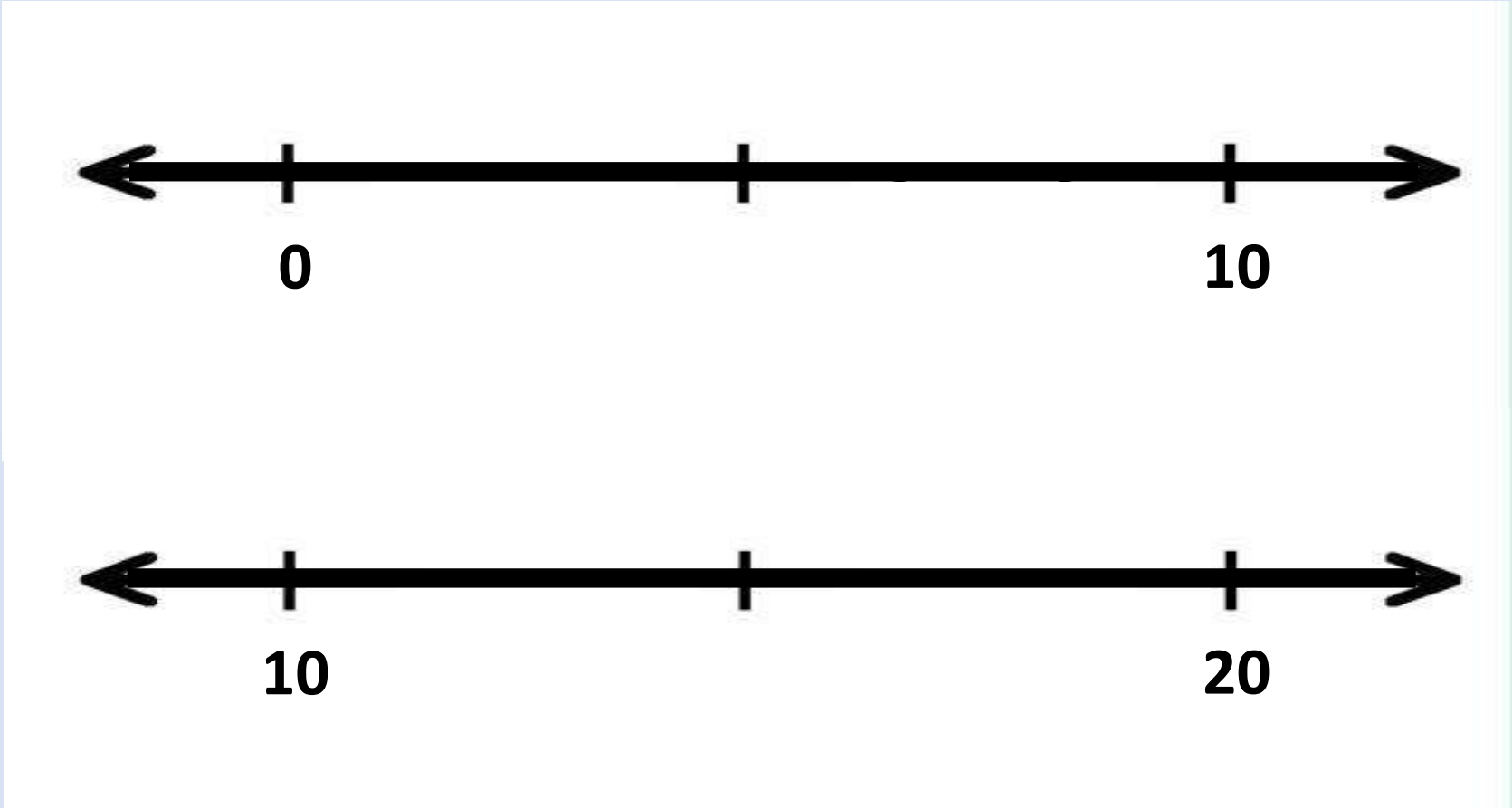
- **Patterns and Sequence of Number**: The Open Number provides a visual representation that builds student understanding of the patterns and number sequence of our number system.
- **Intervals**: Students will learn that equal spaces between numbers indicates that the interval is equal.
- **Benchmark Numbers**: Students will learn to work efficiently through the use of benchmark numbers that allow for reasoning and the ability to calculate in fewer steps (efficiency).
- **Reasoning:** Through Open Number Line activities, students will use the pattern of numbers, intervals, and benchmark numbers to reasoning about numbers on the number line.

Directions

Several number lines will be given on these slides but, for most students, interactive physical number line activities may offer a richer experience leading to a deeper understanding. To see how to use string, markers, and simple paper tents to use these number line activities on an interactive number line, visit MathSnack.blogspot.com: https://mathsnack.blogspot.com/search?q=open+number+line.

Day 9

How are these two number lines the SAME?
How are they DIFFERENT?
What number goes in the middle?

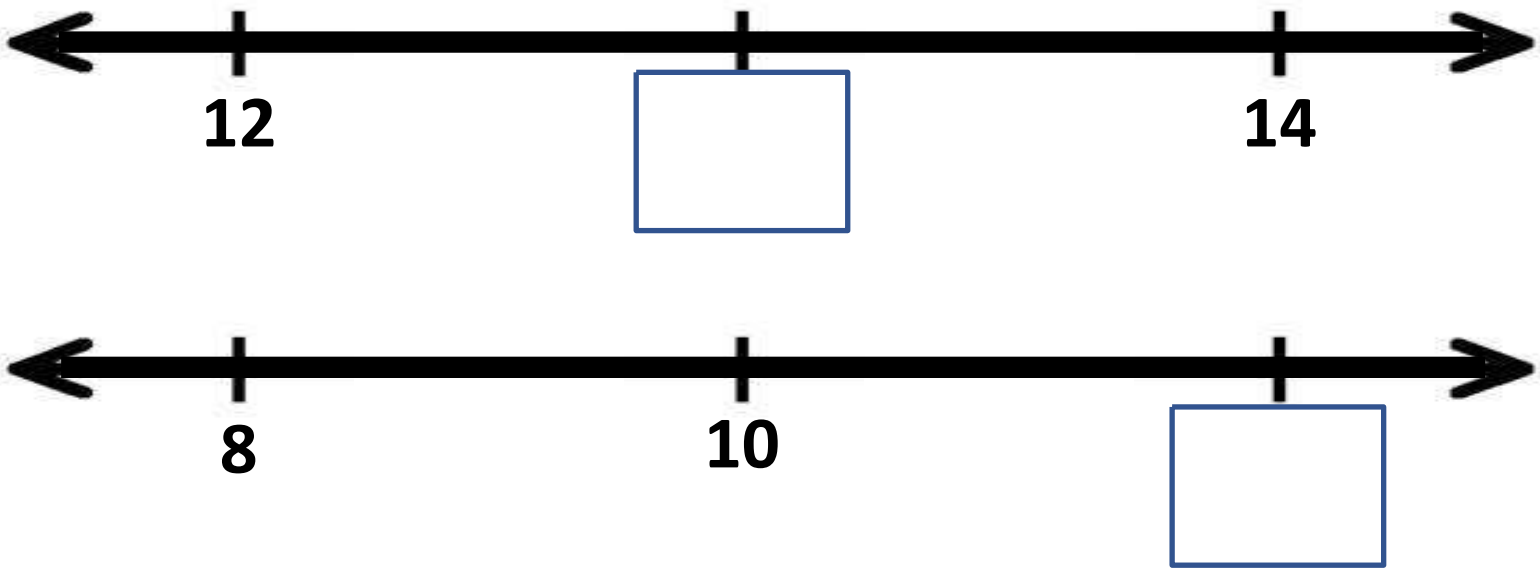


OPEN NUMBER LINE

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

Day 10

If the intervals are equal, what is the missing value?



OPEN NUMBER LINE

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

CALVERT COUNTY PUBLIC SCHOOLS

1.OA.C.6

Directions for NUMBER TALK routines

A Number Talk is a very specific routine with its own structure when used with a group of students.

- Gather students to the board where the problem is written
- Use the silent hand signals (thumbs up at chest) to indicate ready
- Give plenty of think time
- Collect the various solutions that students think are correct
- Have a different student pick and defend one of the solutions
- Annotate the student's ideas
- Avoid taking over and teaching – if students make an error or have an incorrect solution, continue to annotate as the student is describing. The student may self-correct or another student may continue the discussion by pointing out the mathematical error.
- Once a student has correctly identified the solution, do not discuss through incorrect solutions. Instead, ask if any student got the same solution in a different way.
- Annotate the new way suggested by students.
- See more about NUMBER TALKS in the *Number Talks* books by Sherry Parrish or visit our MathSnack.blogspot.com page. On the website, there are videos of teachers in action and additional information. CLICK HERE

4 + 4
4 + 6
4 + 7

Day 11

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.

DURING

Using known facts to find new facts

Key Ideas:

- Students may use their fingers to determine the first sum. Have students talk about the various strategies they used to find 4+4
- Many students will enter this grade knowing their 10 facts, so they may know that 4+6 is 10. Others will need to use fingers or other strategies to determine the sum.
- For 4+7, encourage students to build on what they have done so far. Students will hopefully recognize that if 4+6=10 then 4+7 must equal ONE MORE since 7 is ONE MORE than 6.

Remember, students will come with a variety of strategies. During a Number Talk, the students explain their way of thinking. When students find ways that are especially efficient, highlight those strategies in the reflection that should follow the Talk. Help students to understand a wide variety and guide them into understanding that some strategies work better in some situations, so knowing more than one way to solve an equation like this one is important so they can later choose the method that is most efficient.

AFTER

Help students to recognize that they can use known facts to help them find the sum of other similar facts.

4 + 4

Day 11

NUMBER TALK

1.OA.B.3

Day 12

7 + 3
7 + 3 + 1
3 + 7 + 1

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.

DURING

Using known facts to find new facts

Key Ideas:

- Students may use their fingers to determine the first sum. Have students talk about the various strategies they used to find 7+3. Other students will have this as one of their "known facts"
- Encourage students to use the previous equation to solve the second one. If students know that 7+3 is 10, they can simply add one more rather than starting from zero or 7.
- Encourage students to look at the previous equations as they work to find the solution to the expression 3+7+1. The goal is for students to discover that the order of addends does not change the total sum of those numbers.

Remember, students will come with a variety of strategies. During a Number Talk, the students explain their way of thinking. When students find ways that are especially efficient, highlight those strategies in the reflection that should follow the Talk. Help students to understand a wide variety and guide them into understanding that some strategies work better in some situations, so knowing more than one way to solve an equation like this one is important so they can later choose the method that is most efficient.

AFTER

Help students to recognize that they can use known facts to help them find the sum of other similar facts.

NUMBER TALK

Day 12

7 + 3

NUMBER TALK

1.OA.B.3

Directions for the CHORAL COUNT routine

Choral Counting is an activity in which the teacher leads children in counting aloud together by a given number. As the class calls out each number, the teacher records the count on the board, pausing the count at strategic moments.

To begin, the teacher decides on a number for the students to skip count by, whether to count forwards or backwards, and what number to start and end the count on. Different numbers lend themselves well to surfacing different mathematical ideas.

The goal of this activity is not just to practice rote counting, but to engage children in reasoning, predicting, and justifying. To do this, teachers record the count so that patterns within the numbers are readily noticeable and pause during the count to ask questions like, “What do you think will come next? How do you know?”

– Tedd.org

Want to see a Choral Counting routine in action? Click the image.

CHORAL COUNTING

1 Less

Day 13

- Tell students that today you will be counting, backwards!
- Explain that you will count slowly together so everyone can participate and so the numbers can all be clearly heard.
- If needed, use the number line to point as students choral count from 48 back (try to go back to at least 28).
- If the number line is not needed as support, use the chart on the next slide to chart the numbers that students say.
- After charting the numbers, spend time discussion the PATTERNS that students see
  - The number said is one less than the previous number stated
  - The tens digit on each row is the same
  - The ones digit decreases by one each time
  - When you get to a zero in the ones place, then next ones place value is 9
  - If you look down a column, the ones digit is the same

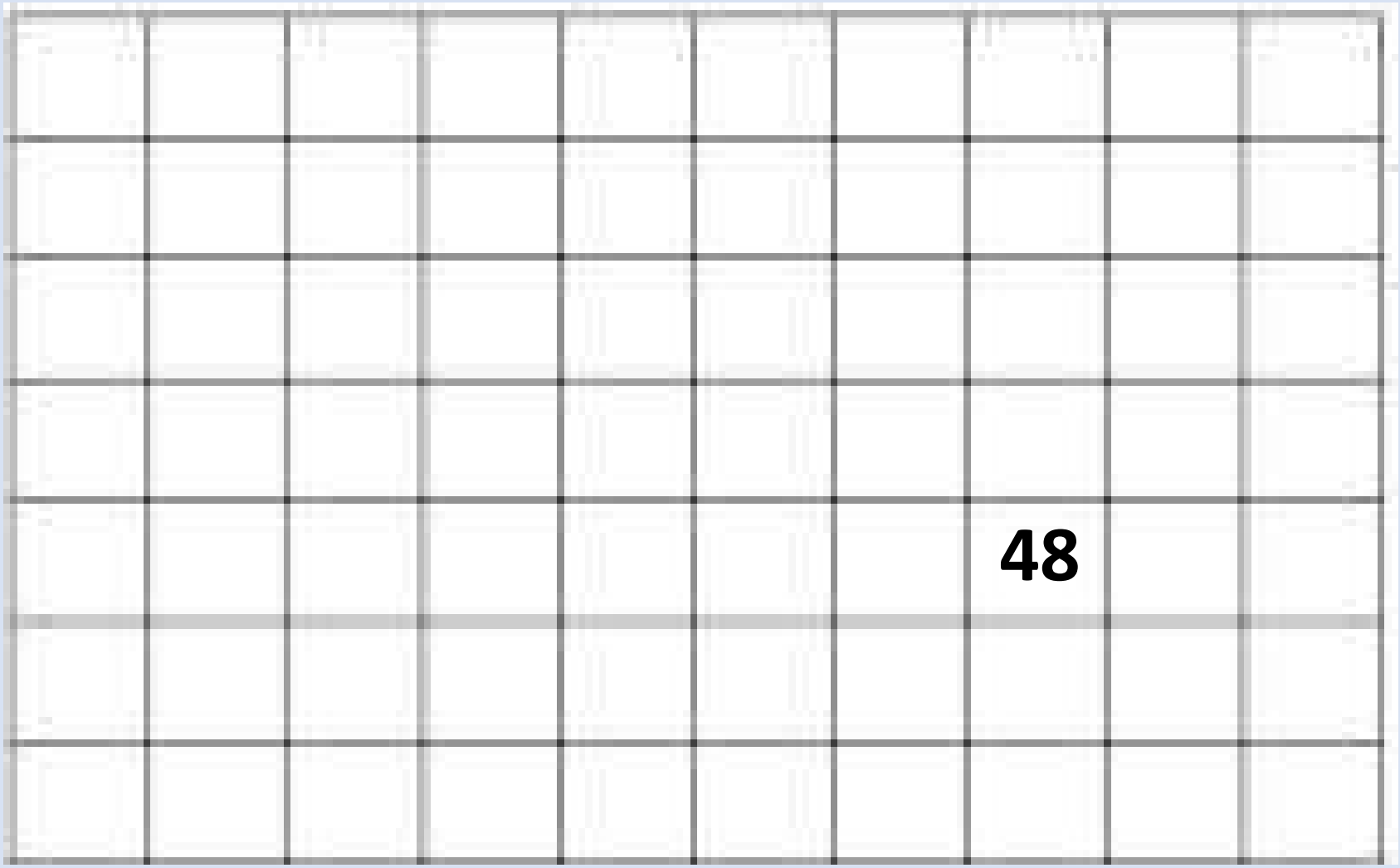
CHORAL COUNTING

CALVERT COUNTY PUBLIC SCHOOLS

Day 13

Start at 48 and count back by 1’s

List responses on hundreds chart below.



CHORAL COUNTING

1.OA.B.5

Day 14

CHORAL COUNTING

Choral Count
Ten More

- *We are going to count all together. The count will be nice and slow so I can write the numbers as you say them on the chart.*
- *We will start on the number 26.*
- *Each time we say a number, we'll say the number that is 10 MORE than the previous number, so the next number after 26 will be 36.*
- *Remember, we are counting all together, nice and slow, so I can write the numbers as you say them.*

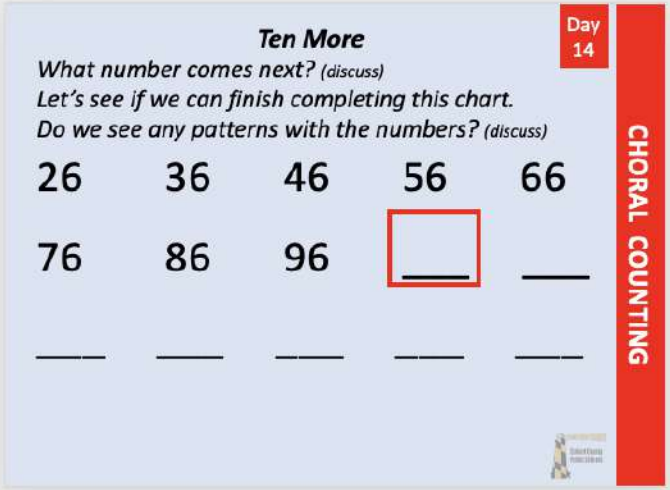
- As students count, write the numbers on the chart
  (see chart on the next slide)
- After you have filled the counting chart, ask students what mathematical patterns do they notice.
- DISCUSS

Use the NEXT SLIDE with students.

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

Day 14

CHORAL COUNTING



A few patterns of note:

- Every other line is 100 more than two lines above it (156 is 100 more than 56)
- The tens place increases by 1.
- The ones place is the same throughout.
- The rows have 5 numbers.
- The first number of each row is 40 less than the last number on the same row.
- WHY is the number below each number 50 more? If we put 6 numbers on each row, would this still be true?

Day 14

Ten More

26 ____ ____ ____ ____

____ ____ ____ *(stop – next slide)*

CHORAL COUNTING

1.NBT.C.5

Day 14

Ten More

What number comes next? (discuss)

Let's see if we can finish completing this chart.

Do we see any patterns with the numbers? (discuss)

26	36	46	56	66
76	86	96	___	___
___	___	___	___	___

CHORAL COUNTING

Day 15

Using the DECIDE & DEFEND routine

- **READ to Understand:** Begin by having students discuss the question being asked. At this time, do NOT focus on the math calculations required or the answer. This step is designed for students to understand the context of the question (What is the gist of the question?)

- **DECIDE**: Pair or group students. Using a consistent pairing will make this routine more fluid so you do not have to take time to pair students every time you want them to discuss. Have students discuss the question and discuss the question and decide which solution is correct (note: partners may not agree and that is fine provided they can justify their own thinking).

- **DRAFT**: Students draft a statement about their ideas (either as a group or individually and it can be written or oral – teacher's choice)

- **DEFEND**: Students share their ideas and defend their reasoning with the whole group. Encourage active listening and accountable talk.

- **RELECT**: To further develop comprehension, have students use ONE of the sentence starters on the "Reflect on Learning" slide after they have discussed and listened to new ideas with classmates.

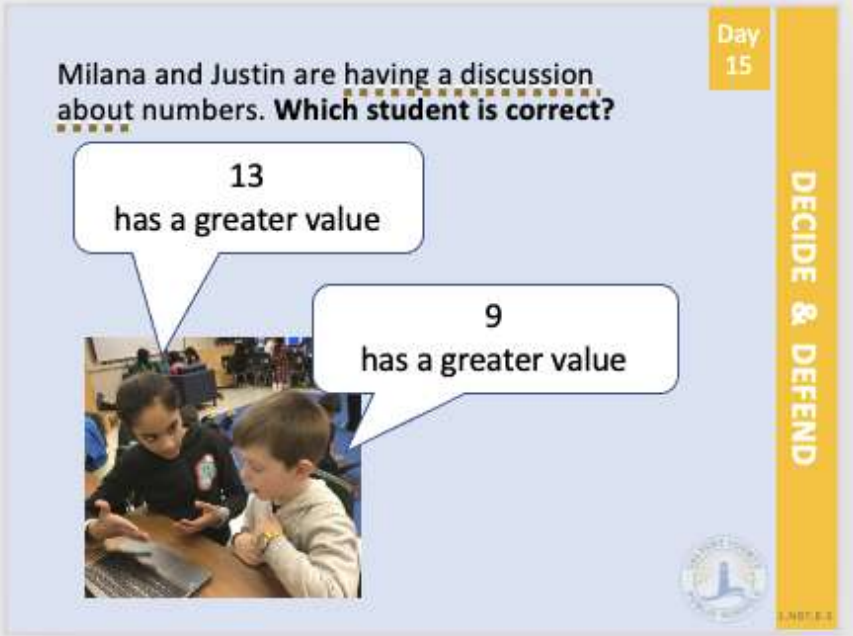
NOTE: This is the CCPS adaptation of the original Decide and Defend protocol

DECIDE & DEFEND

Day 15

Use the NEXT SLIDE with students.

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



Milana is correct. 13 is greater than 10 and 9 is less than 10.

DECIDE & DEFEND

CALVERT COUNTY PUBLIC SCHOOLS

Day 15

Milana and Justin are having a discussion about numbers. **Which student is correct?**

13
has a greater value

9
has a greater value

DECIDE & DEFEND

1.NBT.B.3

Day 15

Reflect on Learning

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

DECIDE & DEFEND

Use the NEXT SLIDE with students.

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

Day 16

DECIDE & DEFEND

Randy Raccoon's statement could be true since 20 red is more than 14 yellow.

Day 16

Randy has a bag of candies.
He has **14 yellow candies**.
There are **more red than yellow** candies.
Whose statement could be true?

DECIDE & DEFEND

1.R.3
K.CC.C.6

Day 16

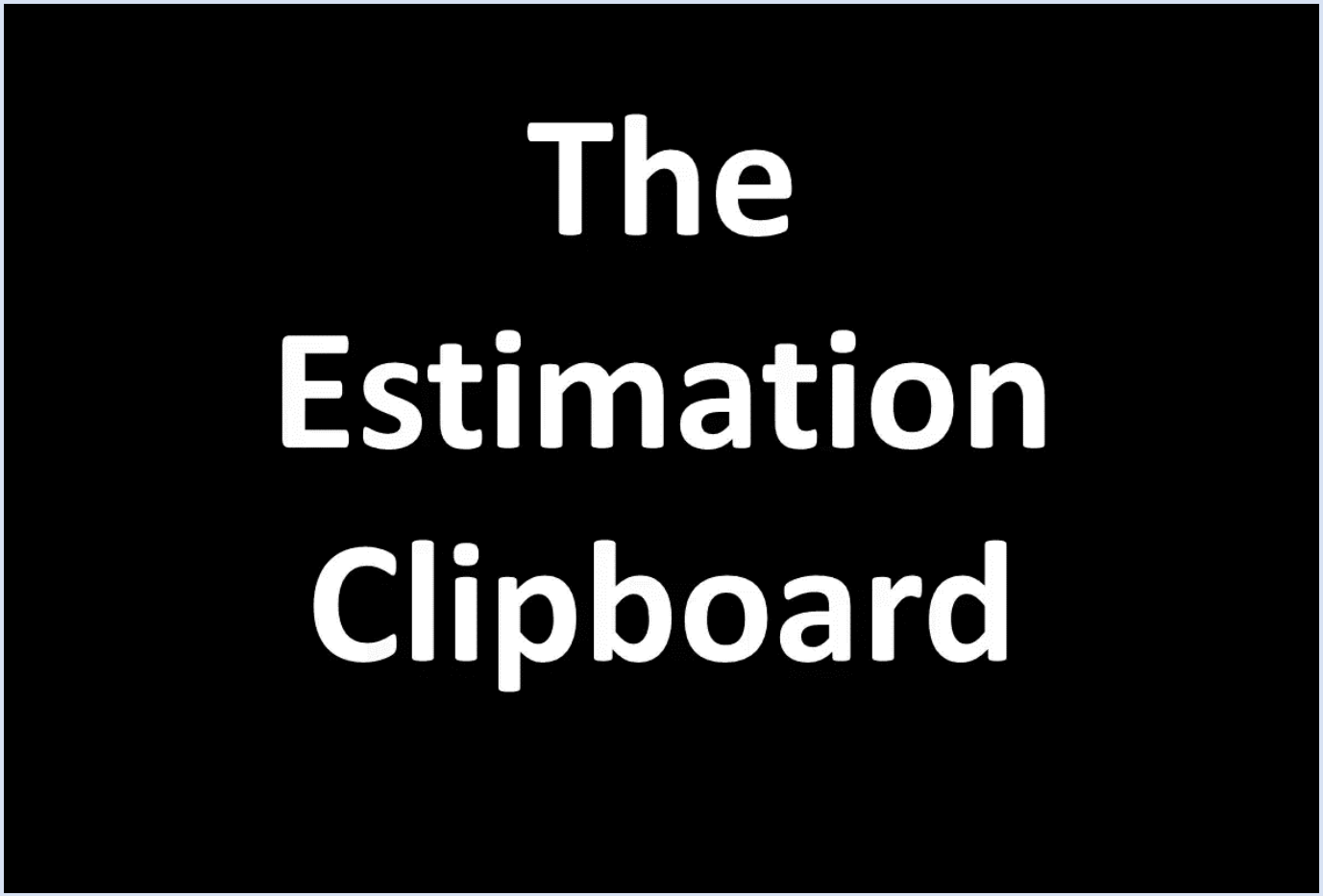
Reflect on Learning

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

DECIDE & DEFEND

Teacher Information

Watch this video to learn how to use the Estimation Clipboard activities.
Note: The Estimation Clipboard activities must be viewed in PowerPoint Slide Show format in order to be seen properly.



Tips for Using The Estimation Clipboard

1. When the first image (of 4) appears, invite the class to share some estimates aloud. Typically, a few students will offer some estimates. Don't spend much time on the first image. After you have received a few responses, reveal the answer.
2. Make a mental note: If you hear answers from a small number of students, you are also hearing silence from nearly all of your class. Anticipate engaging all students in mathematical reasoning by the time you reach the third image.
3. When the second image appears, invite the class to share some estimates aloud again. You will likely hear estimates from more students than the first time. You may want to spend a little more time on the second image, but the power of The Estimation Clipboard is yet to come.
4. When the third image appears, change your approach. Remember, you haven't heard from several students at this point, but everyone's context is growing. When you show the third image, instead of asking for answers aloud have all of the students write down their estimate. Then have them discuss these two questions with a partner: "What was your estimate? Why did you choose it?" Listen carefully to the reasoning.
5. When the moment is right, reveal the third answer. Notice how your students are becoming increasingly engaged in the estimation process. That's partly because you are re-inviting them into a growing context. It's also because they have engaged in writing and discussion. The moment of writing has become a springboard for discussion. They have been given space to voice their ideas, and they are learning more about their ideas as they discuss them.
6. When the fourth image appears, repeat the process from the previous step. Everyone in the classroom writes down their estimate, and then everyone tells their partner what estimate they chose and why they chose it. Expect the conversation to take a little longer here and notice that the conversations about the estimates – and about estimation itself – are becoming more detailed. You may see several students pointing to the screen during their discussions.
7. When you reveal the final answer, listen to your class. Simply listen. Just take a moment to notice.
8. Eventually , perhaps after you have tried several sets , introduce the concept of using a range to estimate – rather than using a single number. Look for opportunities to encourage your students to self-select whether a range or a single number would be more useful.
9. As a learner yourself, engage in the process. Be a wonderer in front of your students. If you want a good question to wonder about, begin with this one: "What is estimation?"

Day 17

Estimation Activity

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

PROMPT: How many glass gems are in the bowl?

ESTIMATION


How many glass gems are in the glass?
Steve Wyborney
11 glass gems
www.stevewyborney.com

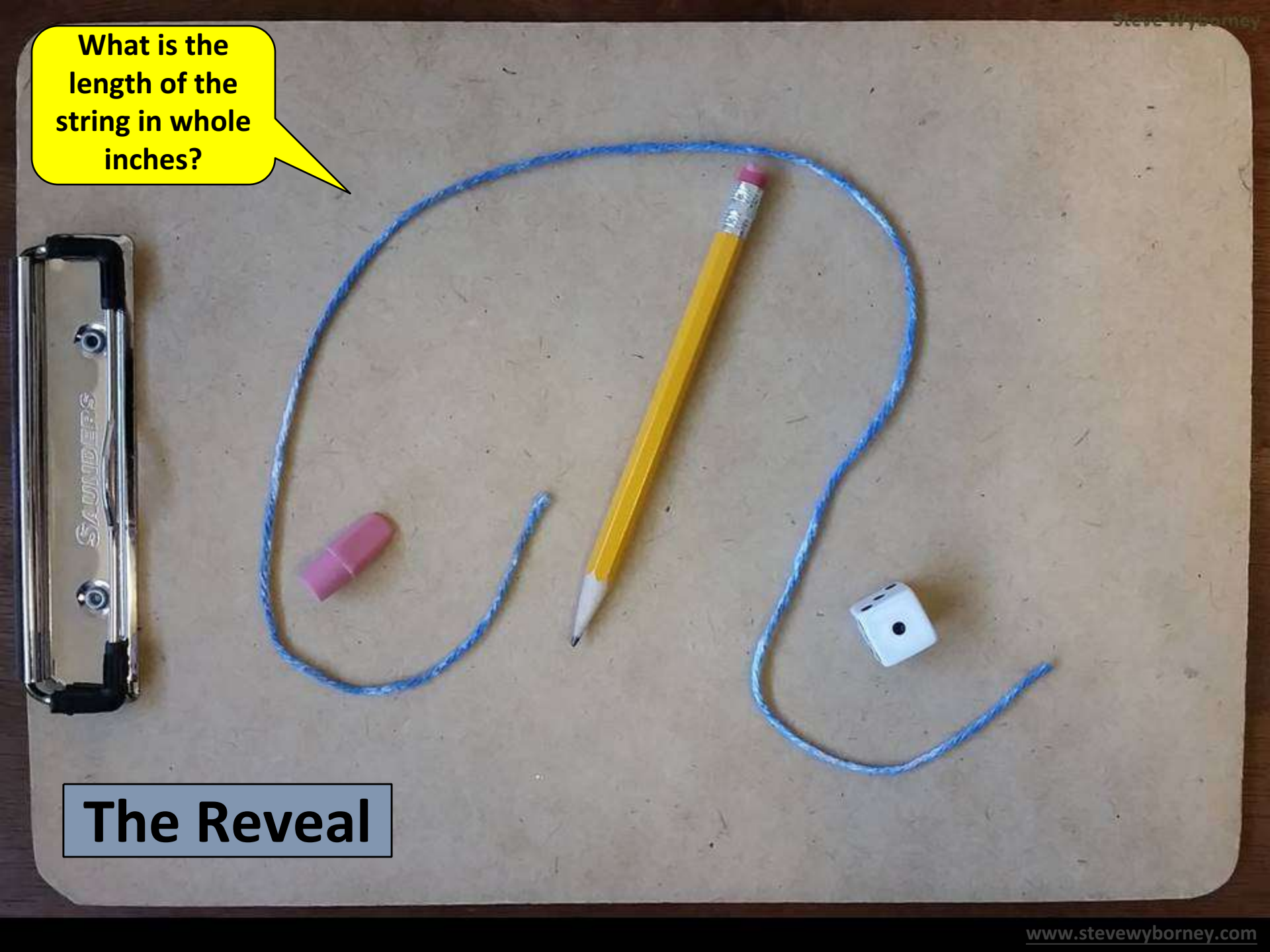
Day 18

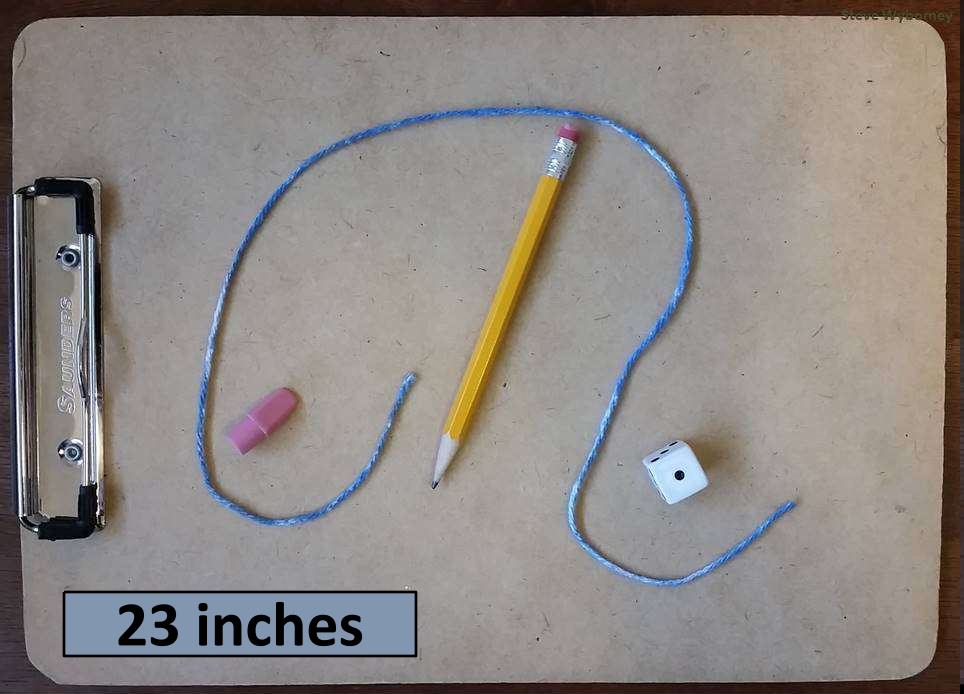
Estimation Activity

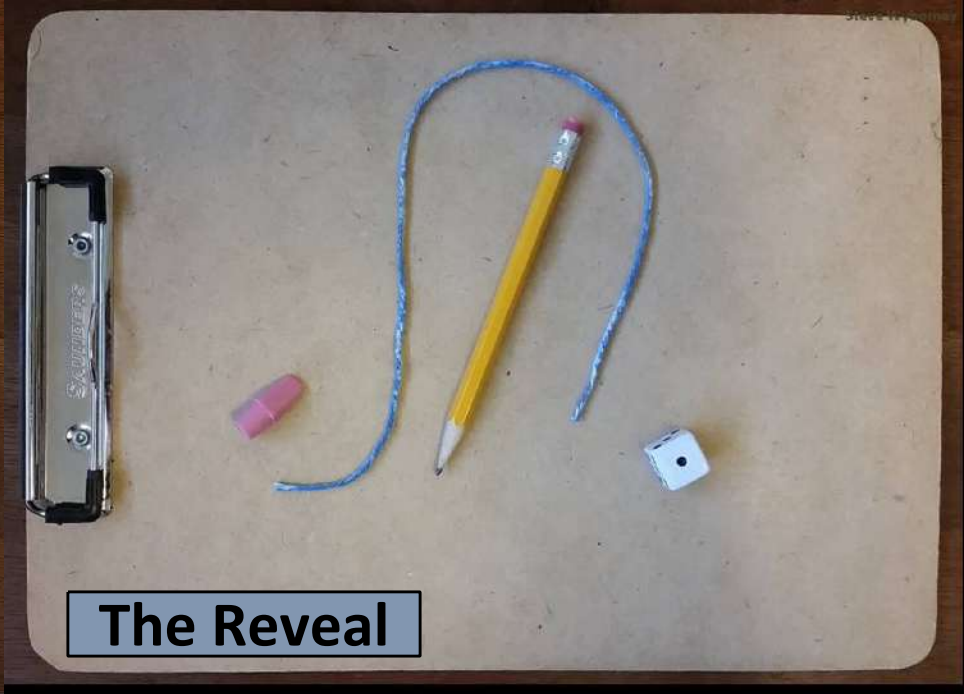
When you are ready to use this activity,
use the PowerPoint platform so the slides work properly.

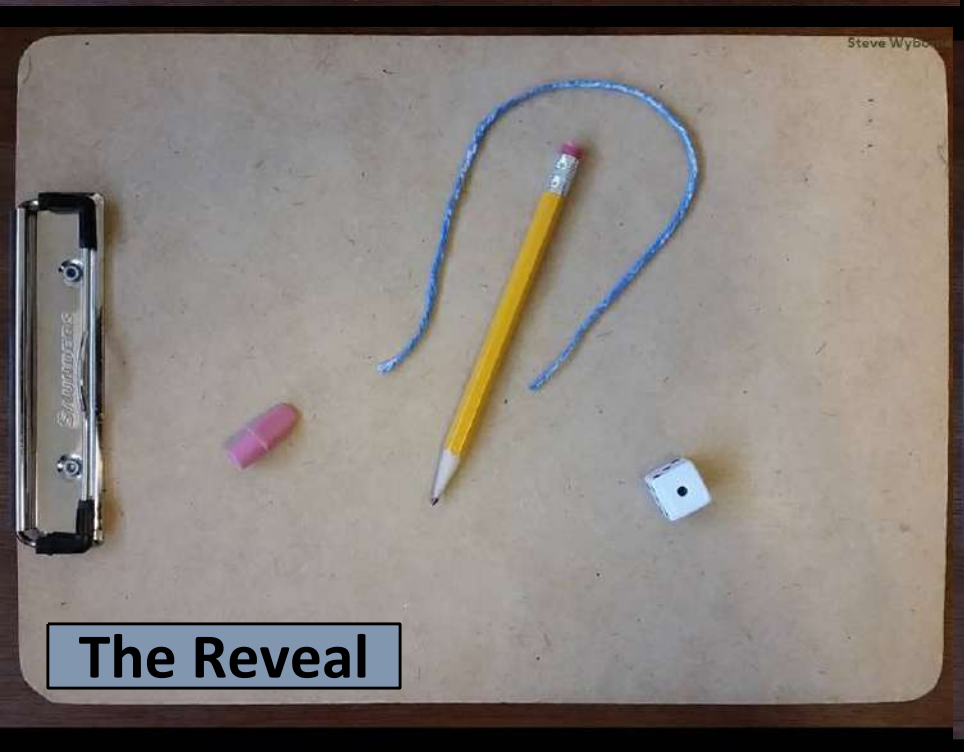
PROMPT: What is the length of the string in inches?

ESTIMATION




23 inches


The Reveal


The Reveal


The Reveal
www.stevewyborney.com

Intro

WHICH ONE DOESN'T BELONG?

Directions for WHICH ONE DOESN'T BELONG routines

Say: "Today we are going to do an activity called 'Which One Doesn't Belong'"

Students are shown four images.

Say: "Look at these four images.
Decide which one does not belong.
Have a reason ready that explains why
the one you picked does not belong
with the other three images. Try to begin your
sentence with the sentence starter 'Three of the
images____ but ____."

Show the image. Leave the image visible throughout.
Give students think time.
Ask students to share.

Examples (NOTE: These are not the only responses possible)

- Three of the bananas curve to the left. Top Left doesn't belong because it curves in the opposite direction of the rest
- Three of the bananas are mostly yellow. Top Right doesn't belong because it is brown and the others are mostly yellow
- Three of the bananas are unpeeled. Bottom Left doesn't belong because it is peeled and the others are not
- Three of the bananas have stickers. Bottom Right doesn't belong because it doesn't have any stickers

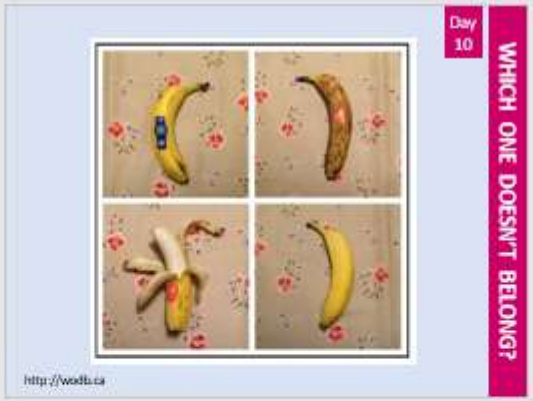
CALVERT COUNTY PUBLIC SCHOOLS

Use the NEXT SLIDE with students.

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

Day 19

WHICH ONE DOESN'T BELONG?



Encourage the use of the sentence starter "Three of the _____...."

Possible Responses:

- Three of the bananas curve to the left. Top Left doesn't belong because it curves in the opposite direction of the rest
- Three of the bananas are mostly yellow. Top Right doesn't belong because it is brown and the others are mostly yellow
- Three of the bananas are unpeeled. Bottom Left doesn't belong because it is peeled and the others are not
- Three of the bananas have stickers. Bottom Right doesn't belong because it doesn't have any stickers

CALVERT COUNTY PUBLIC SCHOOLS

Day 19

WHICH ONE DOESN'T BELONG?

"Three of these bananas…"

http://wodb.ca

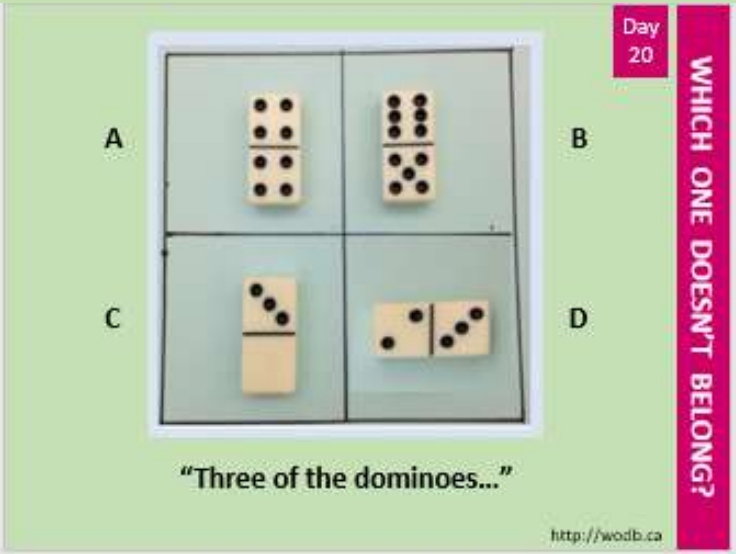
1.G.A.1

Use the NEXT SLIDE with students.

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

Day 20

WHICH ONE DOESN'T BELONG?



Encourage the use of the sentence starter "Three of the _____...."

Possible Responses:

- Three of the dominoes are not have two different numbers on each side of the line. Domino A does not belong because it does not have different numbers (4 & 4)
- Three of the dominoes have a sum that is less than 10. Domino B doesn't belong it is the only one that does not have a value less than 10
- Three of the dominoes have dots on both side of the line. Domino C doesn't belong because it is the only one that doesn't have dots in both sections of the domino
- Three of the dominoes are vertical (up and down). Domino D doesn't belong because it is the only one that is not laying in a vertical position

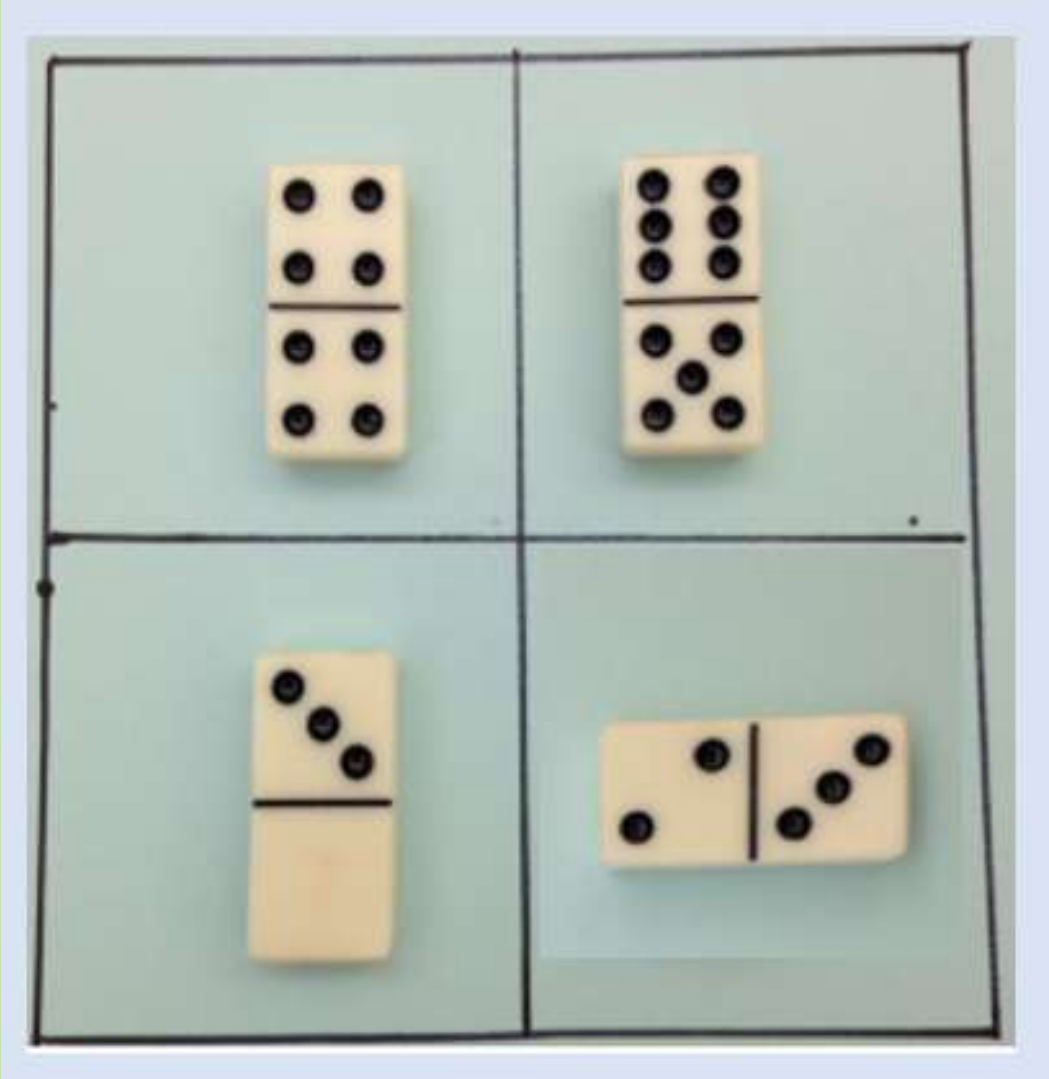
CALVERT COUNTY PUBLIC SCHOOLS

Day 20

WHICH ONE DOESN'T BELONG?

A

B



C

D

"Three of the dominoes…"

http://wodb.ca

1.MD.C.4