180 Days of
Number Sense Routines
Grade 1
Days 21-40

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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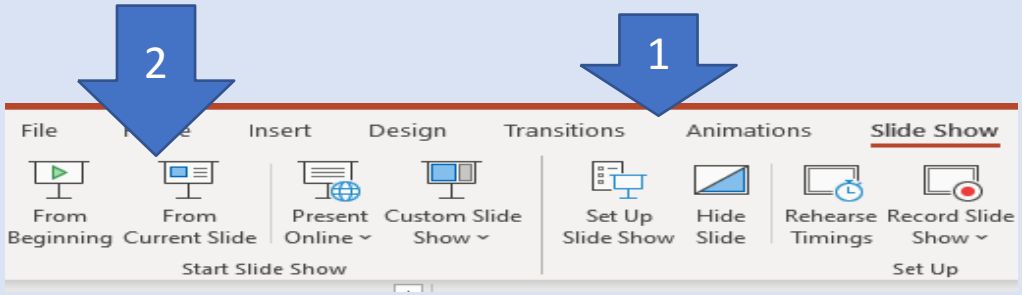
Number Sense Routines

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

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.

Count on by 1s – starting on 23

Day 21

BEGIN WITH NUMBER: 23
COUNTING RULE: +1
GOAL:

- Find PATTERNS within the counted numbers.
- Use those patterns to PREDICT numbers that will appear later in the counting sequence.

CHART: As students choral count, chart their responses – this will give them a visual while counting AND will prompt great discussion when finished counting. **Be sure to write the numbers aligned as shown below to make the patterns more visible.**

Ask: What patterns do you notice when you look at the numbers that we counted?

		23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50

NOTE: You do not need to fill all spaces on the next slide. **Go until students see the patterns emerge. Discuss the patterns**. Make predictions about numbers that have not yet been written (above and below). If you create the pattern on paper or another board for more room, be sure to create 5 or 10 columns and to start the 23 in the third column of the first row so the intended patterns emerge.

Possible Patterns to Notice

- For each column, the ONES place is the same number all the way down the column
- The TENS place increases by 1 as you look down each column
- All of the numbers, except the last number, has the same number in the 10s place on each row
- When you look down the last row, it is skip counting by 10s (10, 20, 30, 40….)
- There are also patterns when you look at the diagonal rows that students may notice as well

CHORAL COUNTING

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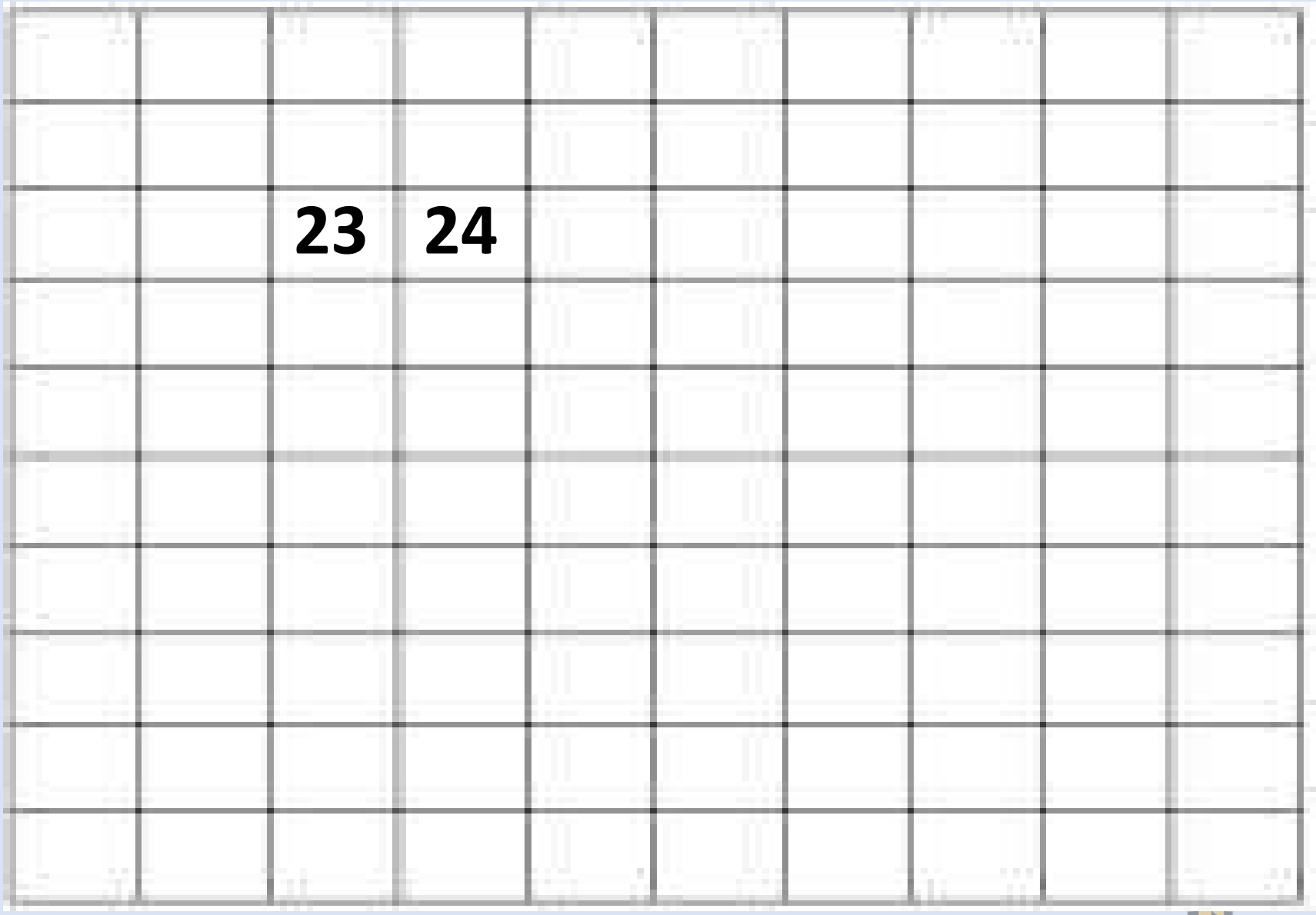
Start at 23 and count up by 1s.

List responses on hundreds chart below.

Day 21

CHORAL COUNTING



Day 22

Using the DECIDE & DEFEND routine

As you do this routine with students, USE the CHECKLIST on the left side of the problem as a way to help organize the thinking process

- **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

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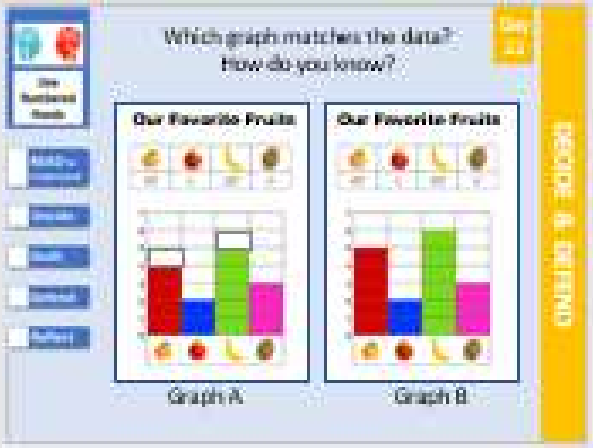
DECIDE & DEFEND

Day 22

Use the NEXT SLIDE with students.

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



Graph B matches the data.
Graph A does not match for both the orange and the banana. There is no colored box to represent the diagonal hash mark to bundle the 5 count.

NOTE: Orange, apples, banana, kiwi

DECIDE & DEFEND

Use Numbered Heads

READ to Understand

Decide

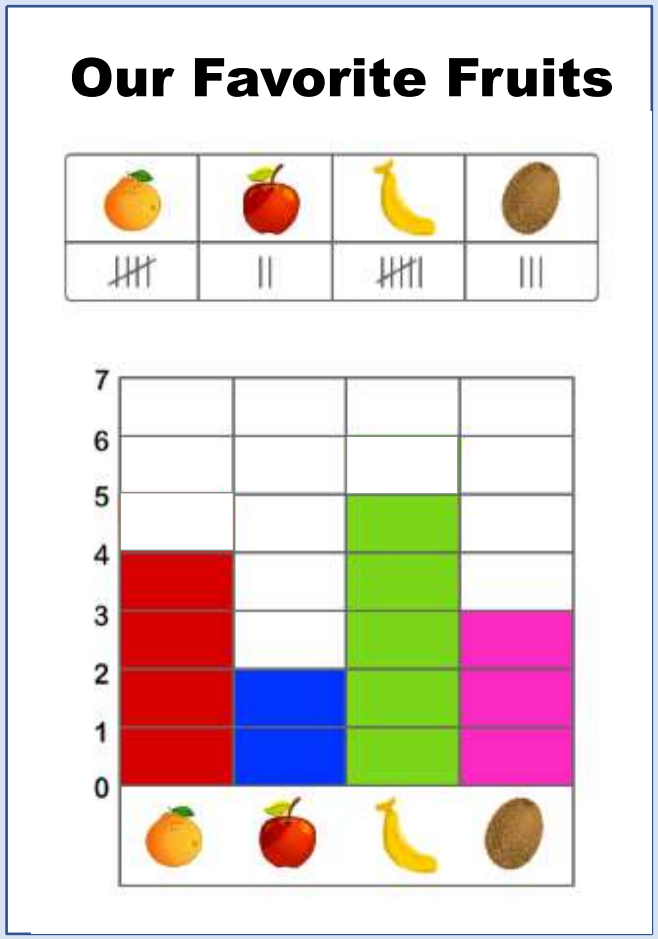
Draft

Defend

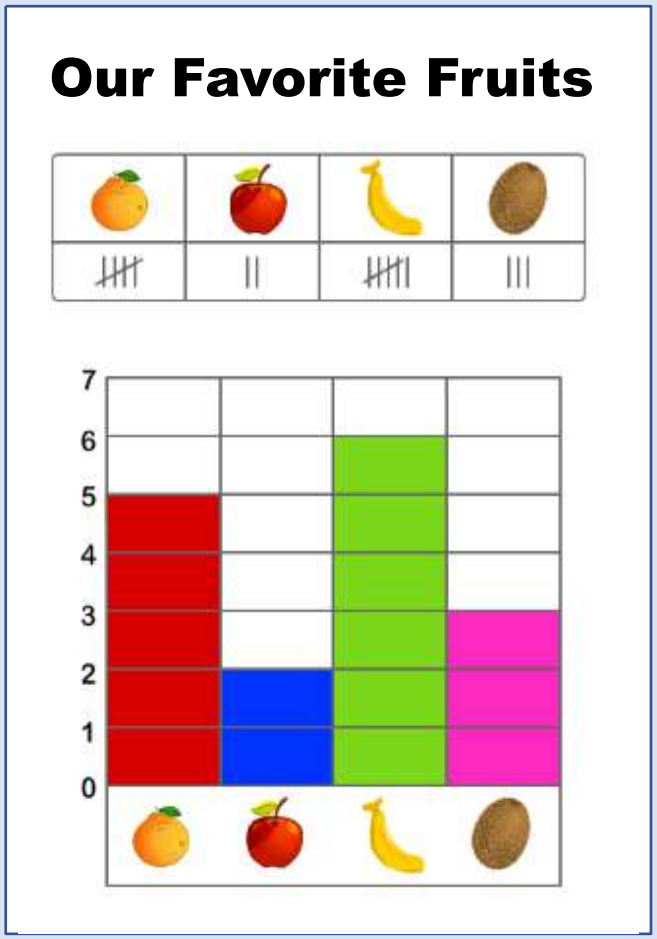
Reflect

Day 22

Which graph matches the data?
How do you know?



Graph A



Graph B

DECIDE & DEFEND

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Reflect on Learning

Day 22

DECIDE & DEFEND

- 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 ….

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Day 23

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: **How many dice are in the cup?**

ESTIMATION

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How many dice are being held by the cup?
Steve Wyborney
The Reveal
www.stevewyborney.com


28 dice


The Reveal

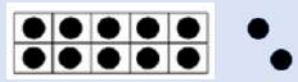

The Reveal


The Reveal
www.stevewyborney.com

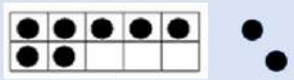
Day 24

NUMBER TALK

Group A



Group B



Group C

TEACHER NOTES

BEFORE

Use this slide in Smart Notebook. The next slide has the String of dot pattern cards 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. As you do this routine, 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

Using a 10-Frame to determine the total

Ask students, "How many dots do you see?"
Record student answers without judgement.
Then ask, "How do you see them?"
Do NOT allow students to come up to the board – we are working to develop their oral skills in mathematical language.
As the student describes how they see the dots, annotate using simple gestures or by circling groups as they see them.

AFTER

After doing the Number Talk String, be sure to highlight the efficient strategies and encourage students to "look for" places they can use it throughout the day.

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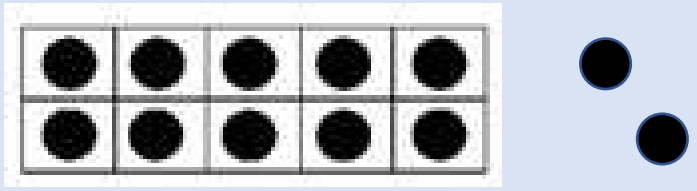
Day 24

HOW MANY DOTS?

Group A



NUMBER TALK

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Directions for OPEN NUMBER LINE routines

If you have never watched, or haven't watched it recently, we encourage you to watch the video that models how to use and interactive number line.
https://www.youtube.com/watch?v=p8nssffnHkM&feature=youtu.be

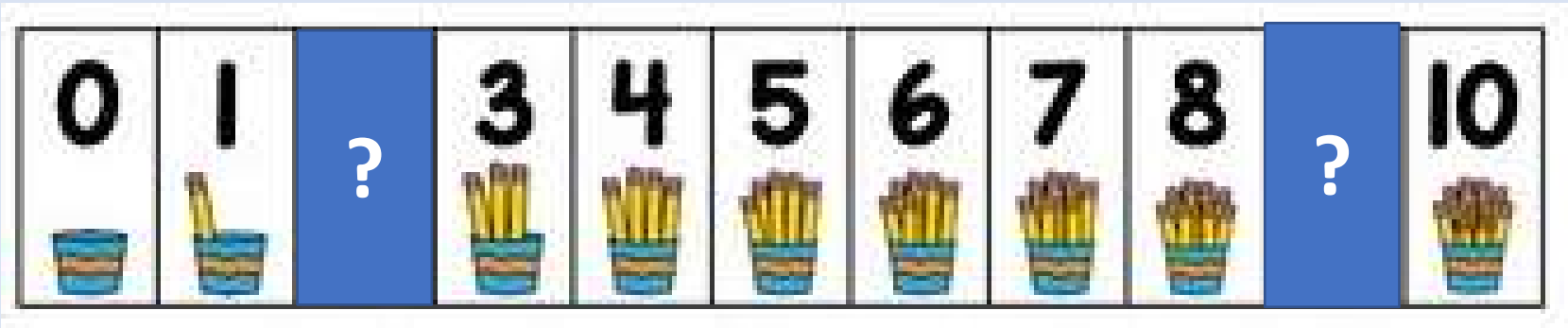
Teacher Note: You can use the digital number line on the next slide or you can create an interactive number line in your classroom for this routine.

If using an interactive number line, prepare number cards using blank paper folded into tents that hang on the number line string.

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

Day 25

Which numbers are hiding?
How do you know?



OPEN NUMBER LINE

TIP: ***Write student ideas below the missing number boxes.***
For more Open Number Line Activities, visit http://www.MathSnack.blogspot.com

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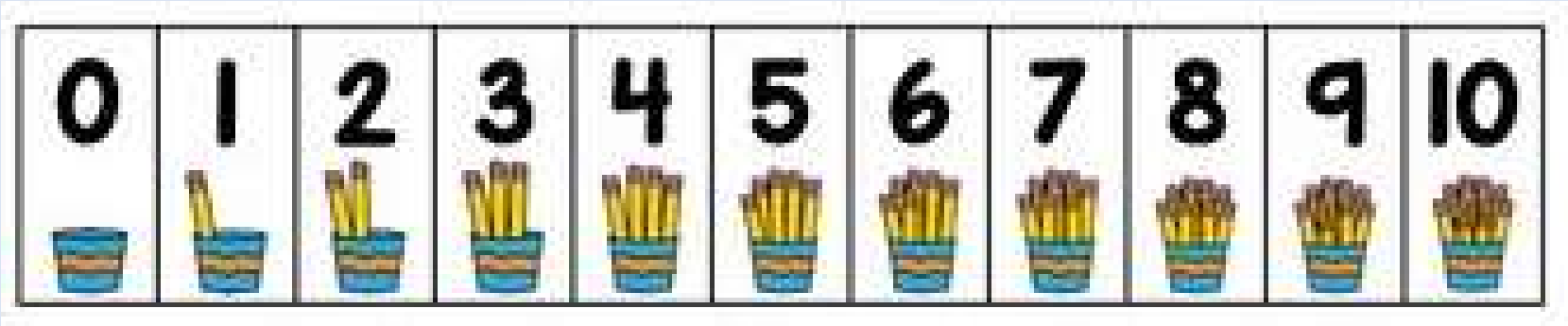
Day 25

Which numbers are hiding?
How do you know?



OPEN NUMBER LINE

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

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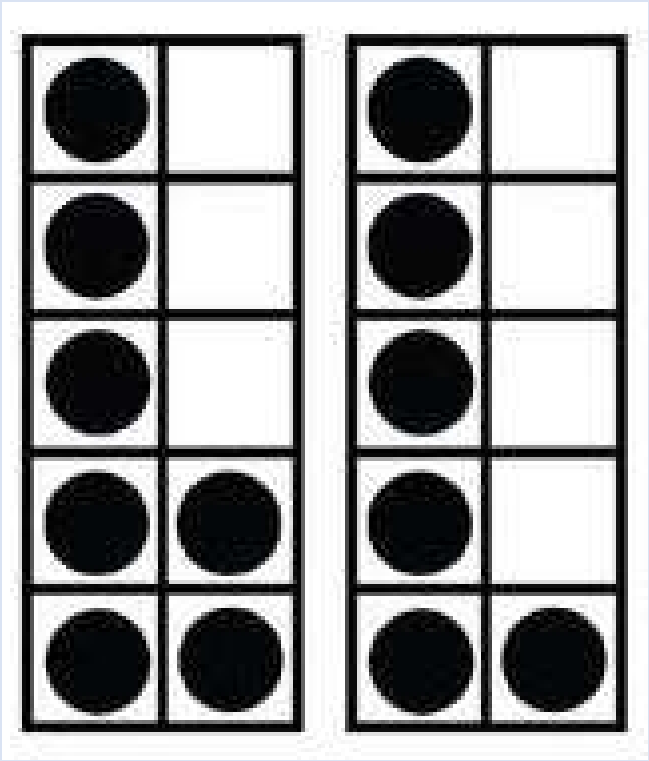
Directions for QUICK COUNT routines

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 26

QUICK COUNT



What do you NOTICE?

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Day 26

QUICK COUNT

What did you NOTICE?

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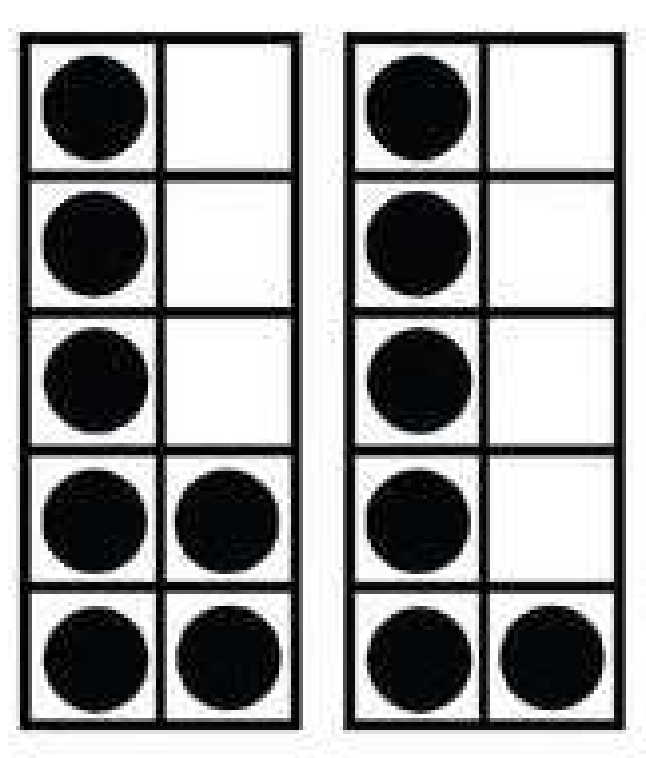
Day 26

QUICK COUNT



How many do you see?

What counting shortcut did you use?

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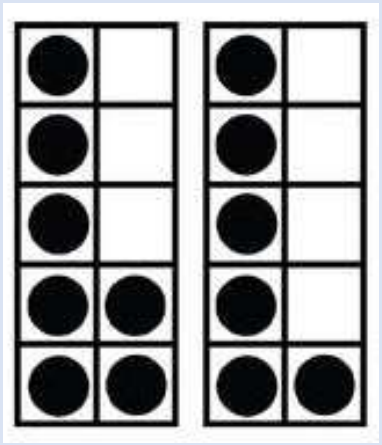
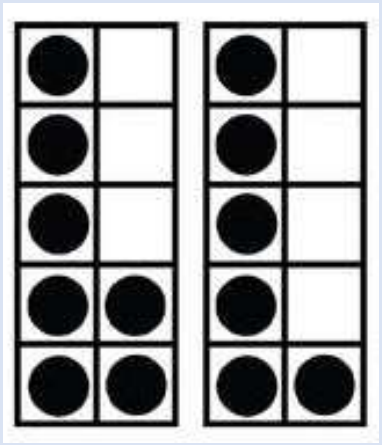
I noticed ____ so I _____

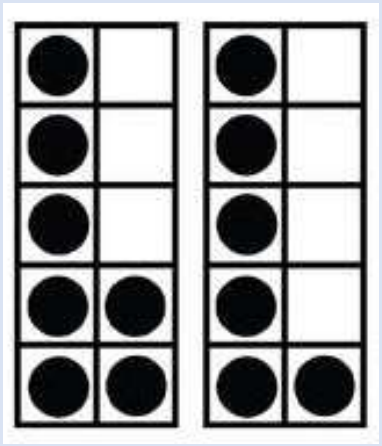
(They) noticed ____ so they___

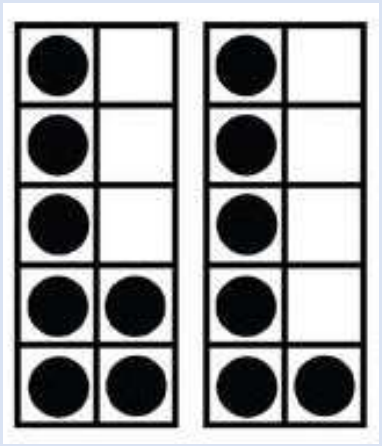
Day 26

QUICK COUNT









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Day 26

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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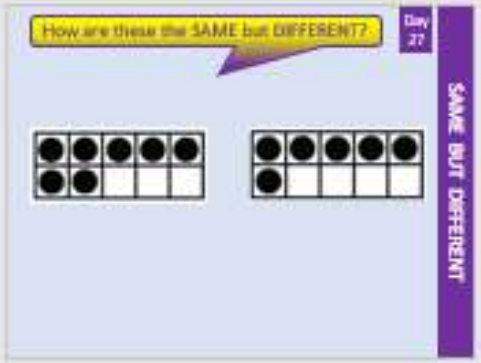
Day 27

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….”



Possible Responses:

- Both have a full row of 5 at the top, but one has 2 more and the other only has 1 more
- Both are 10-frames with dots, but one has 7 dots. The other has 6 dots.
- Both have missing dots, but one has 3 missing dots. The other has 4 missing dots.

SAME BUT DIFFERENT

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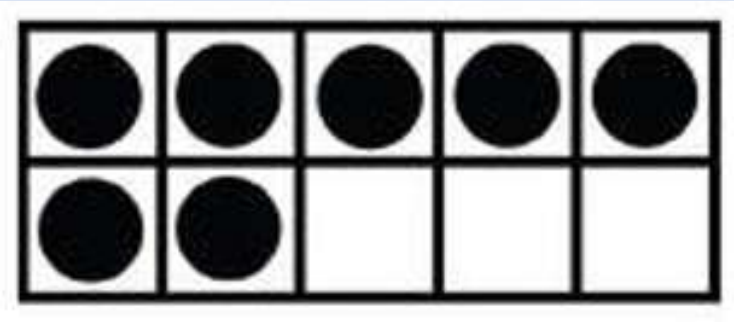
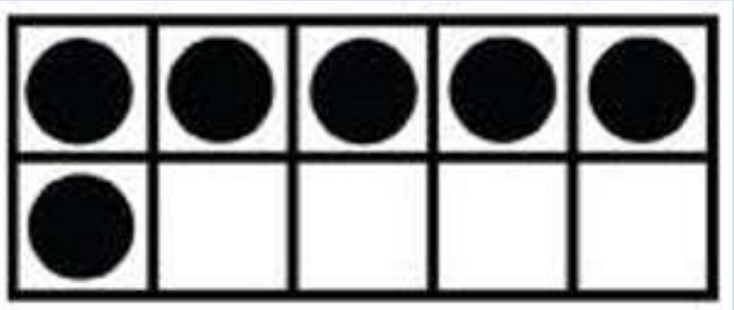
How are these the SAME but DIFFERENT?

Day 27





SAME BUT DIFFERENT

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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

How many blue shapes do you

Splat!

How many shapes are under the splat? How do

How else could

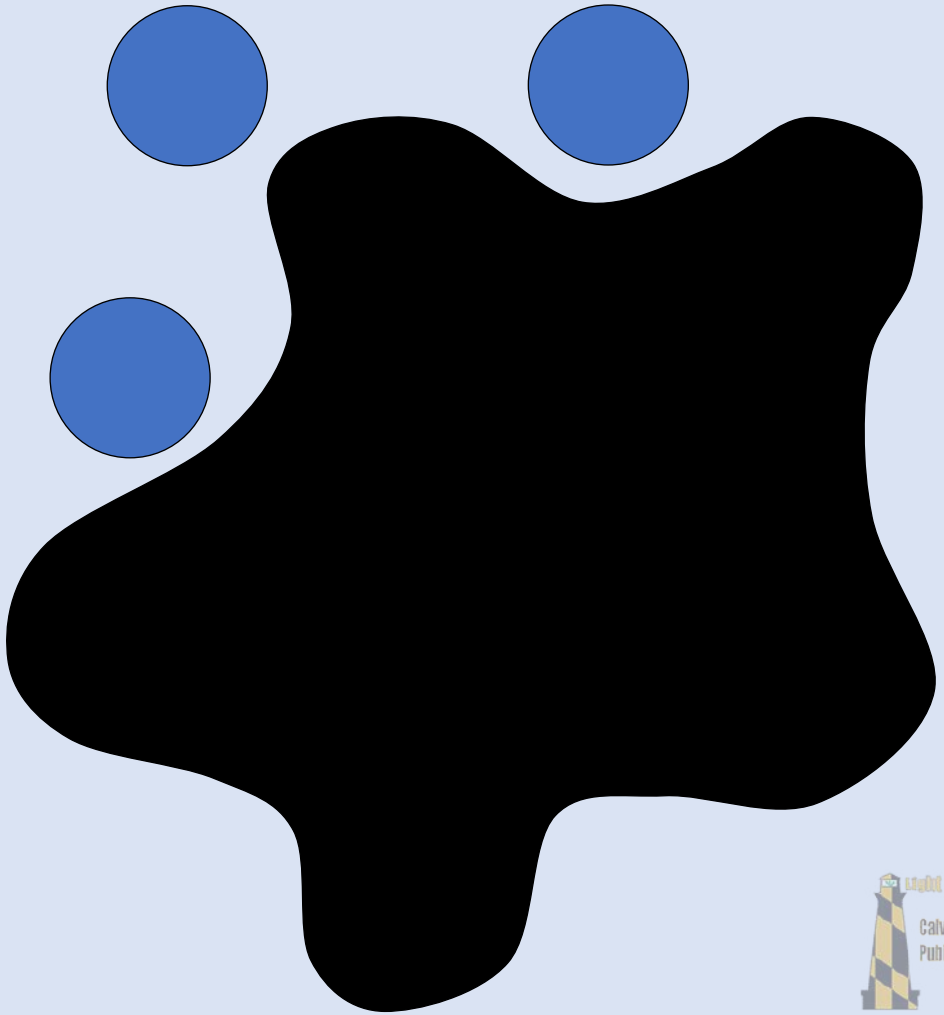
Let's look under the splat to see how many shapes

What can we learn from this picture?

4

Day 28

SPLAT!

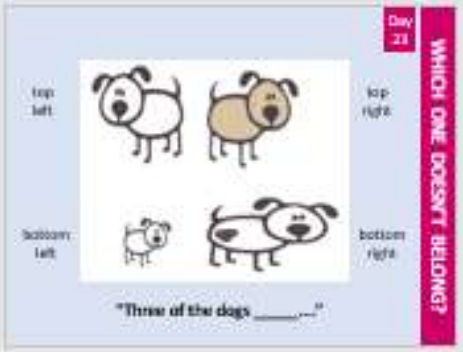


Use the NEXT SLIDE with students.

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

Day 29

WHICH ONE DOESN'T BELONG?



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

Possible responses:

- 3 of the dogs are looking to the right. Top left is the only dog not looking to the right.
- 3 of the dogs are white. Top right is the only dog that is not white.
- 3 of the dogs are larger. Bottom left is the only dog that is small.
- 3 of the dogs have no spot. Bottom right is the only dog that has a black spot on his back.

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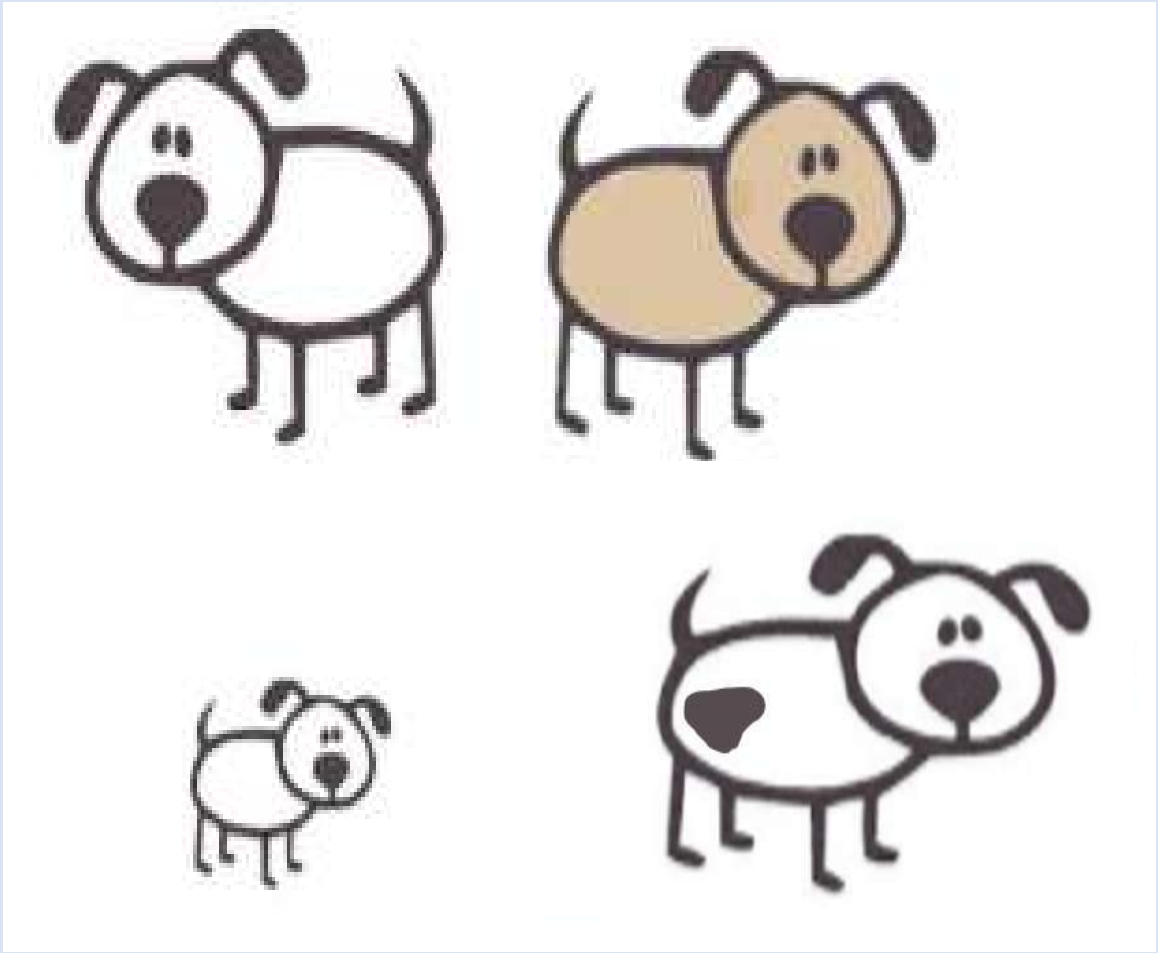
Day 29

WHICH ONE DOESN'T BELONG?

top left

top right



bottom left

bottom right

"Three of the dogs _____...."

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Day 30

CHORAL COUNTING

Use the NEXT SLIDE with students.

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

Count on by 10s – starting on 10

BEGIN WITH NUMBER: 10
COUNTING RULE: +10
GOAL:

- Circle the numbers or point as students count by 10s.
- Ask: What patterns do you notice?
  - All have a 0 in the ones place
  - They are highlighted in pink boxes
  - They are at the end of each row
  - The tens place increases by one with each row
- ASK: If we add another row under this last row, what number do you think will be UNDER the 120? Explain the pattern that makes you think so.

Counting 1-120									
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100
101	102	103	104	105	106	107	108	109	110
111	112	113	114	115	116	117	118	119	120

Day 30

Counting 1-120

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100
101	102	103	104	105	106	107	108	109	110
111	112	113	114	115	116	117	118	119	120

CHORAL COUNTING

Calvert County Public Schools

Day 31

Esti-Mystery

Estimation Activity with clues!

NOTE: This Estimation routine contains a number chart. Have students determine which numbers should be eliminated BEFORE clicking to reveal the number chart after each clue.

Students use clues to solve the estimation mystery. After all 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.

PROTIP: Use a number chart/line in a dry erase sleeve for students to track the numbers that are/are not possible.

ESTIMATION

How many foam peanuts?

As the clues appear, use the information to narrow the possibilities to a smaller set. After each clue, use estimation again to determine which of the remaining answers is the most reasonable.

Write down your first estimate. After each clue, you'll see if your estimate is still a possibility. After each clue, if it is no longer possible write down a new estimate – and be prepared to explain why you chose it.

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Clue #1

There are more than 9 pieces.
You can't see all of the pieces.

Clue #2

There are less than 16 pieces.

Clue #3

The answer is not 10 or 11.

Clue #4

The answer is not 13 or 14.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

After seeing the clues, you have narrowed the possibilities to a small set of numbers. Before you see the answer, select your final estimate. Write it down and explain to someone why you chose that number.

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The Reveal
Click to see the answer.

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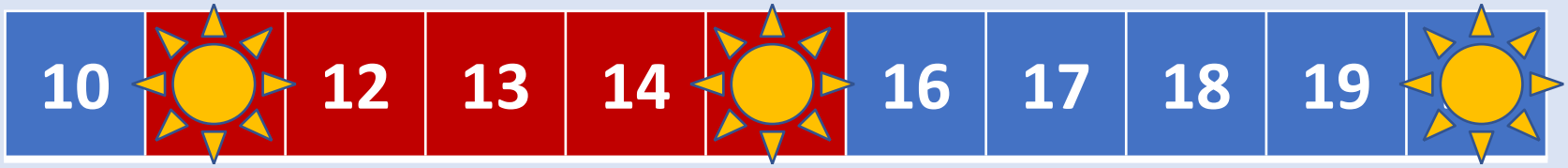
Day 32

Which numbers are hiding?
How do you know?



OPEN NUMBER LINE

TIP: ***Write student ideas below the missing number boxes.***

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

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Day 32

Which numbers are hiding?
How do you know?

OPEN NUMBER LINE

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

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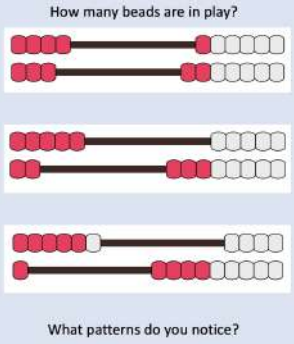
Day 33



TEACHER NOTES

BEFORE

You will use a Rekenrek (Math Rack) for this Number Talk. You can either use a hands-on rack or can show the images on the slide. Students will NOT have a Rekenrek; they will look at the configuration of the teacher's Rekenrek. The goal of this Talk is not to have students create the configurations, but rather, to describe the total number of beads and how they know. Encourage students to listen to one another's description of how they know the total. As you do this routine, 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.

Notes about using the Rekenrek

- The bead location is stated as viewed from the front of the rack (student perspective).
- Beads begin in a position known as "at rest" – this means that all beads are to the right on the rack.
- Proper orientation of the rack has the WHITE beads to the RIGHT.
- When putting beads "into play", slide the designated number of beads all the way to the left on the rack.
- The first/last bead should be touching the frame of the rack.

DURING

Counting All/Counting On Using the Rekenrek

Ask students, "How many beads do you see In Play?"
Then ask, "How do you see them?"
Do NOT allow students to come up to the Rekenrek – we are working to develop their oral skills in mathematical language.
As the student describes how they see the beads, use simple gestures to offer a visual to classmates who are listening.

AFTER

After doing the Number Talk String, be sure to highlight the efficient strategies and encourage students to "look for" places they can use it throughout the day.

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NUMBER TALK

Day 33

NUMBER TALK

How many beads are in play?

What patterns do you notice?

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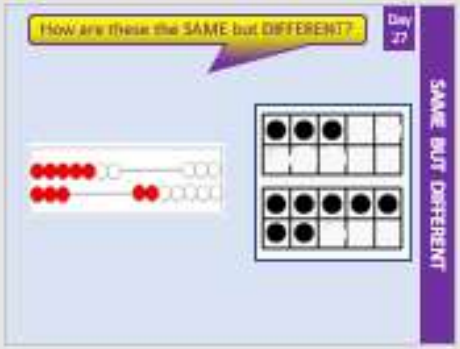
Day 34

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….”



Possible Responses

- Both represent a total of 10, but one is represented on a Rekenrek, the other in 10-Frames
- The Rekenrek shows 7+3. The ten-frame shows 3+7

SAME BUT DIFFERENT

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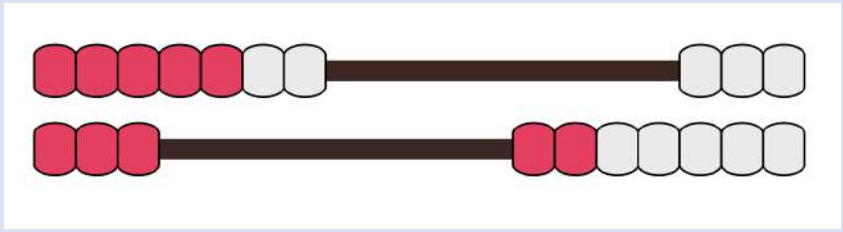
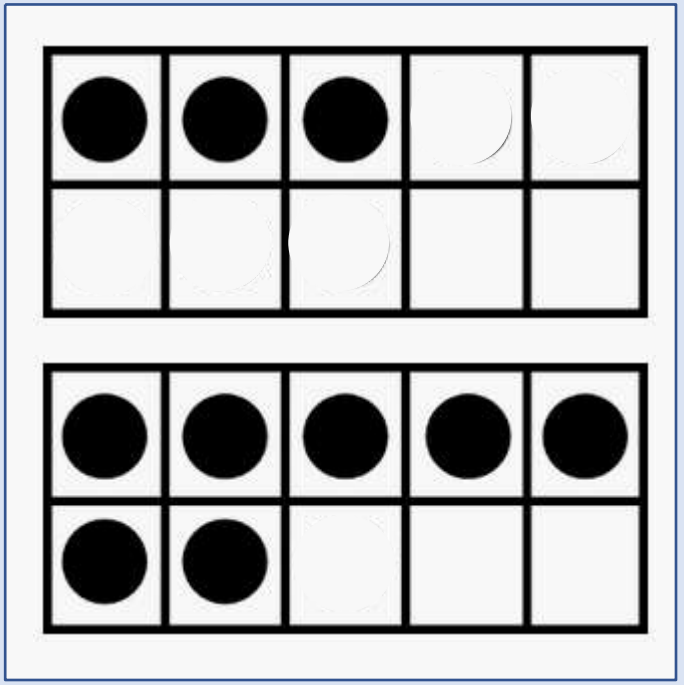
How are these the SAME but DIFFERENT?

Day 34





SAME BUT DIFFERENT

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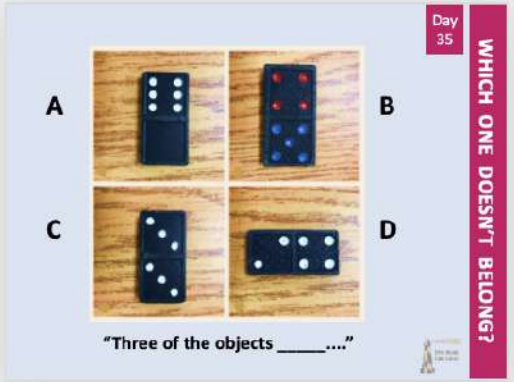
Day 35

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!



A: Three have "pips" on both sides of the domino. A does not have pips on both sides of the domino
B: Three have a value of 6. B does not have a value of 6
C: Three of the dominos have different values on each side 6/0, 4/5, 4/3. C has the same value on both sides 3/3
D: Three of the dominos are oriented vertically (standing tall). D is not standing tall; it is laying down long.

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Day 35

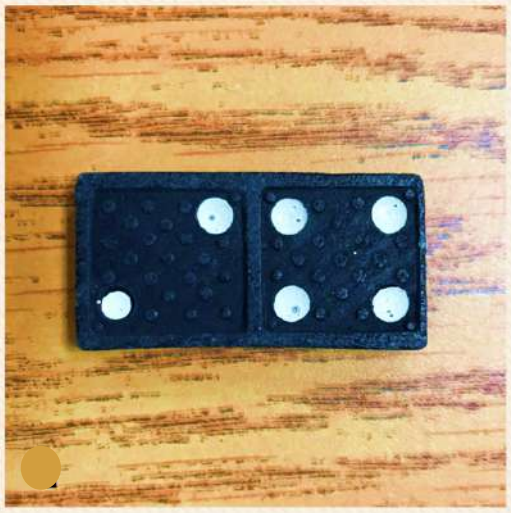
WHICH ONE DOESN'T BELONG?

A

B

C

D



"Three of the dominoes _____...."

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How many blue shapes do you

Splat!

How many shapes are under the splat? How do

How else could

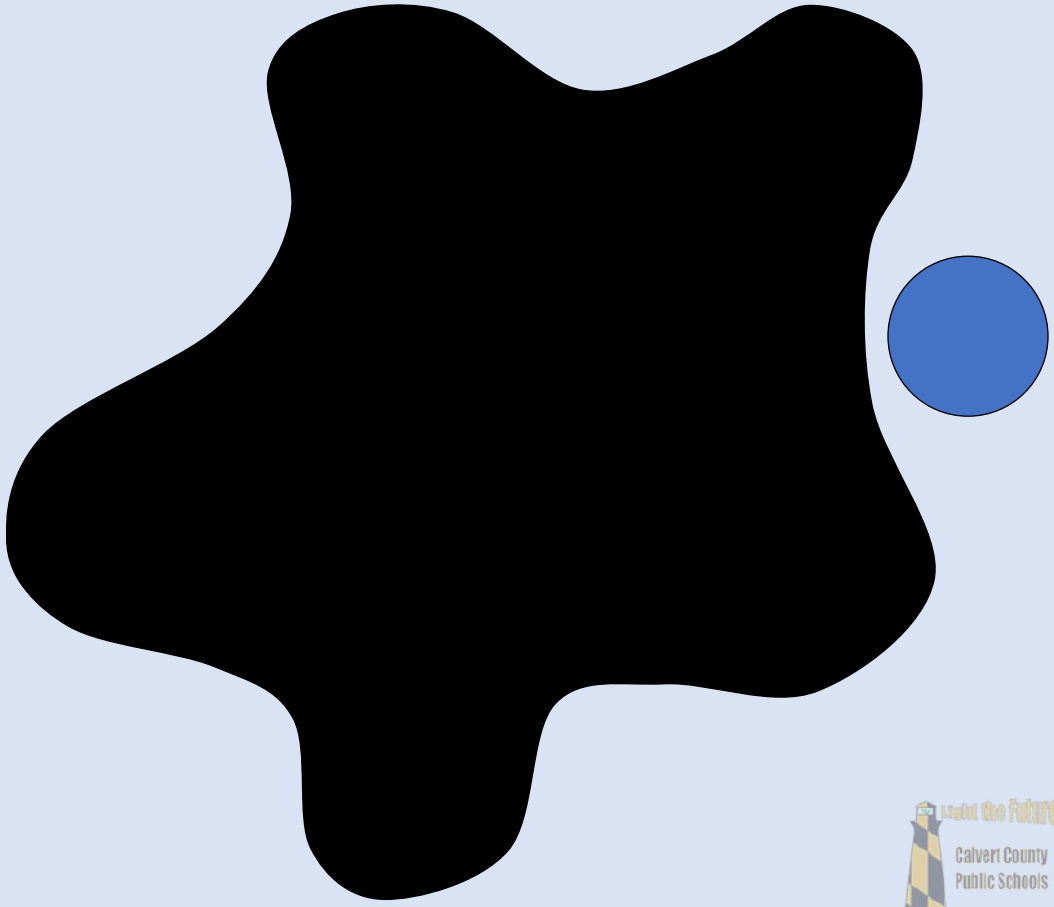
Let's look under the splat to see how many shapes

What can we learn from this picture?

9

Day 36

SPLAT!



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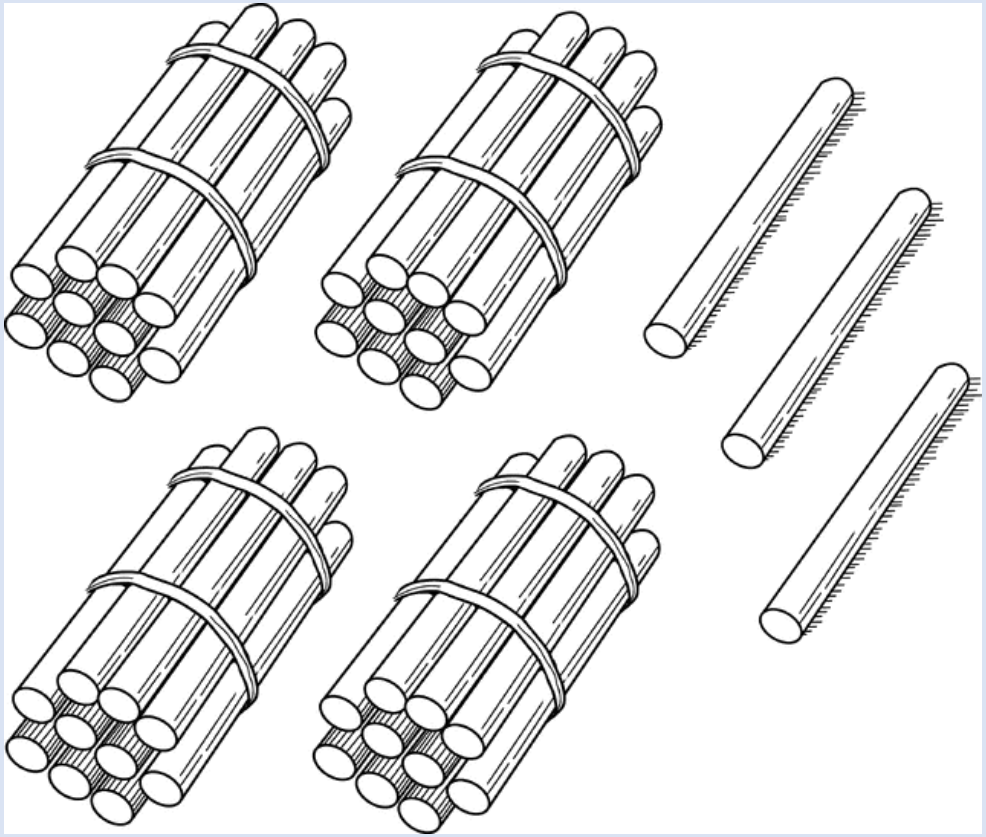
www.stevewyborney.com

Day 37

QUICK COUNT



What do you NOTICE?

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Day 37

QUICK COUNT

What did you NOTICE?

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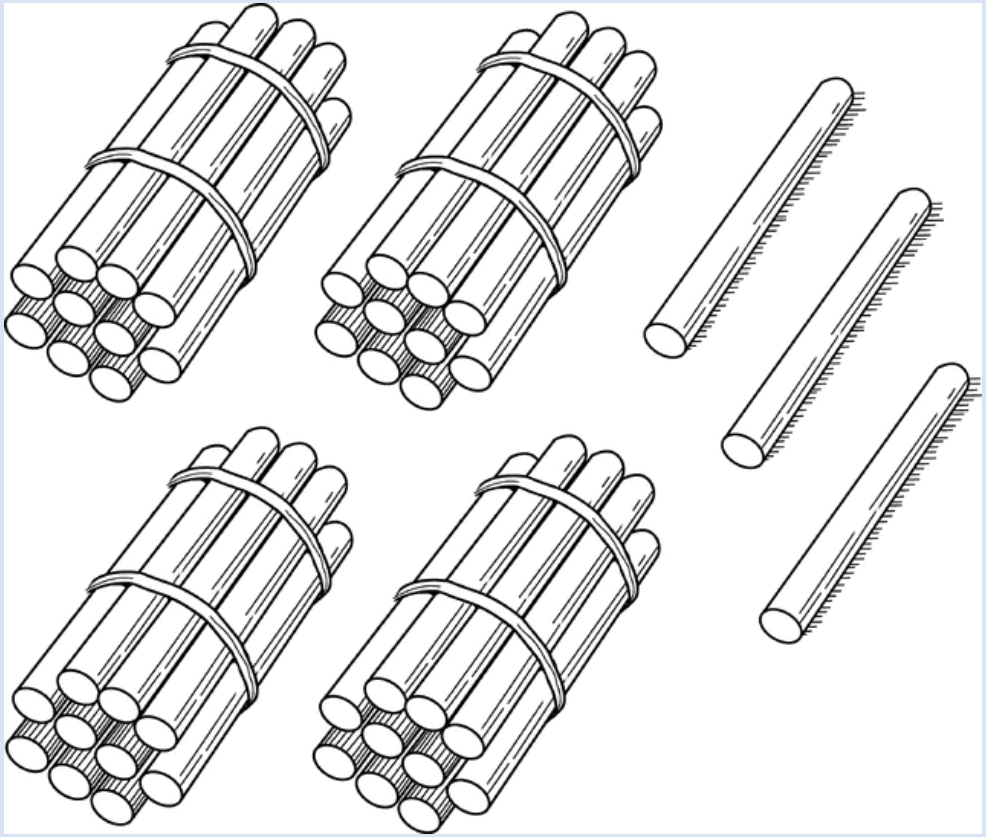
Day 37

QUICK COUNT



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

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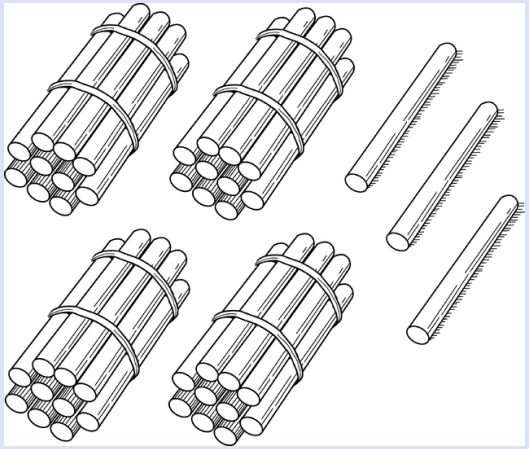
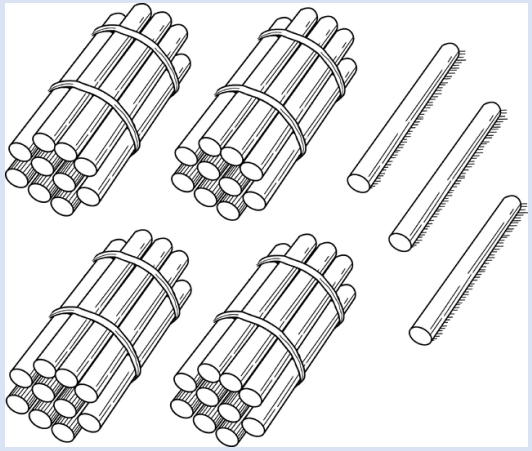
Day 37

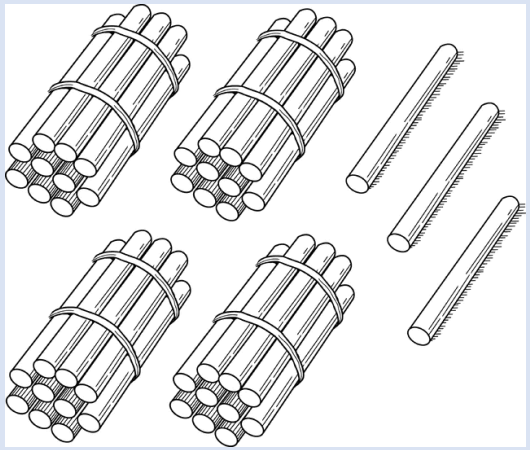
QUICK COUNT



(They) noticed ____ so they _____

I noticed ____ so I _____





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Day 37

QUICK COUNT

Reflect

What was mathematically important?

Day 38

Using the DECIDE & DEFEND routine

As you do this routine with students, USE the CHECKLIST on the left side of the problem as a way to help organize the thinking process

- **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

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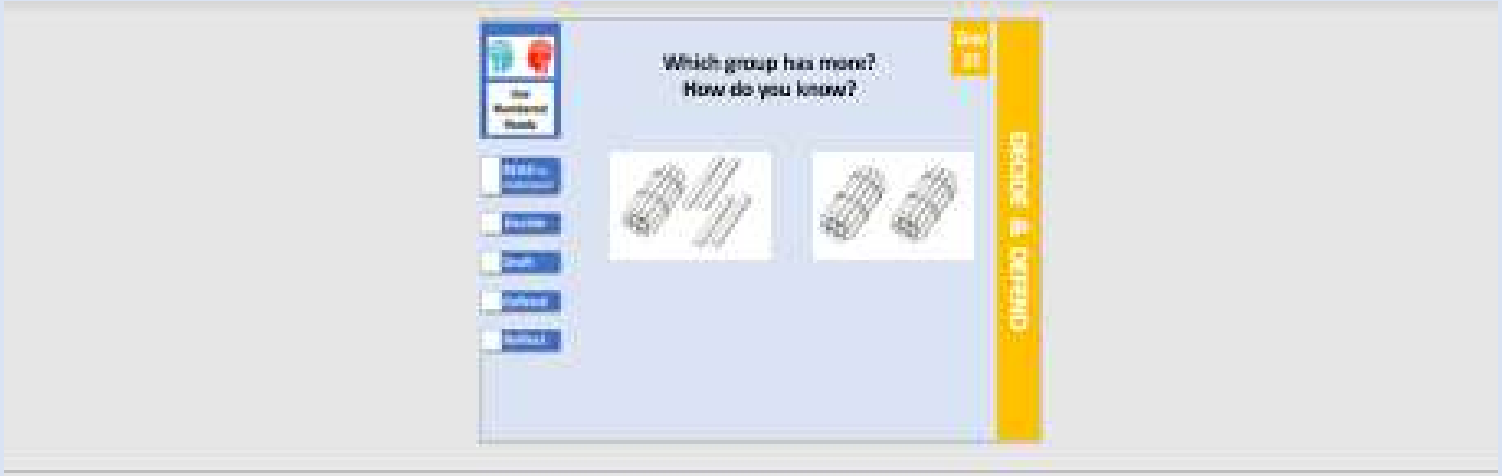
DECIDE & DEFEND

Day 38

Use the NEXT SLIDE with students.

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



- The first group has a bundle of 10 and 4 more for a total of 14
- The second group has two bundles of 10 for a total of 20
- 20 is more than 14
- Students may need clarification to understand that 1 bundle represent 10 unbundled sticks.
- Misconception: Some students may see 5 items vs. 2 items if they mistakenly count the bundles as 1 instead of 1 group of ten.

DECIDE & DEFEND

Calvert County Public Schools

Use Numbered Heads

READ to Understand

Decide

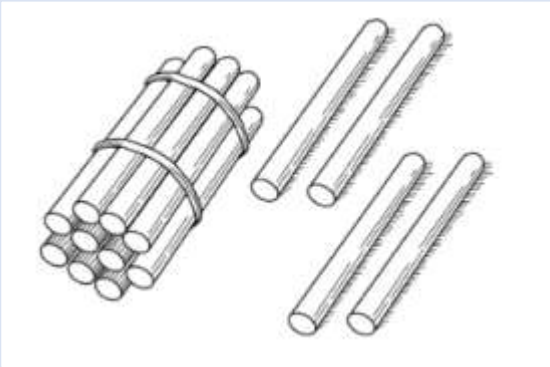
Draft

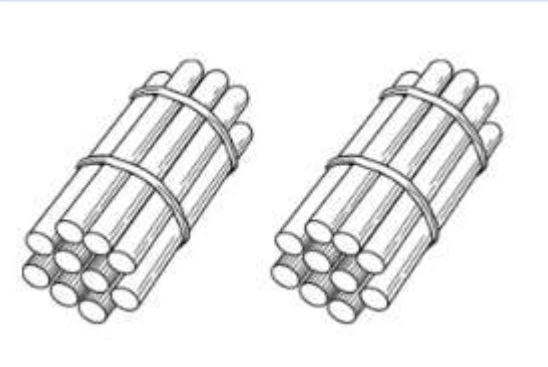
Defend

Reflect

Day 38

Which group has more? How do you know?





DECIDE & DEFEND

Day 38

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 39

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: **How many dice are in the jar?**

ESTIMATION

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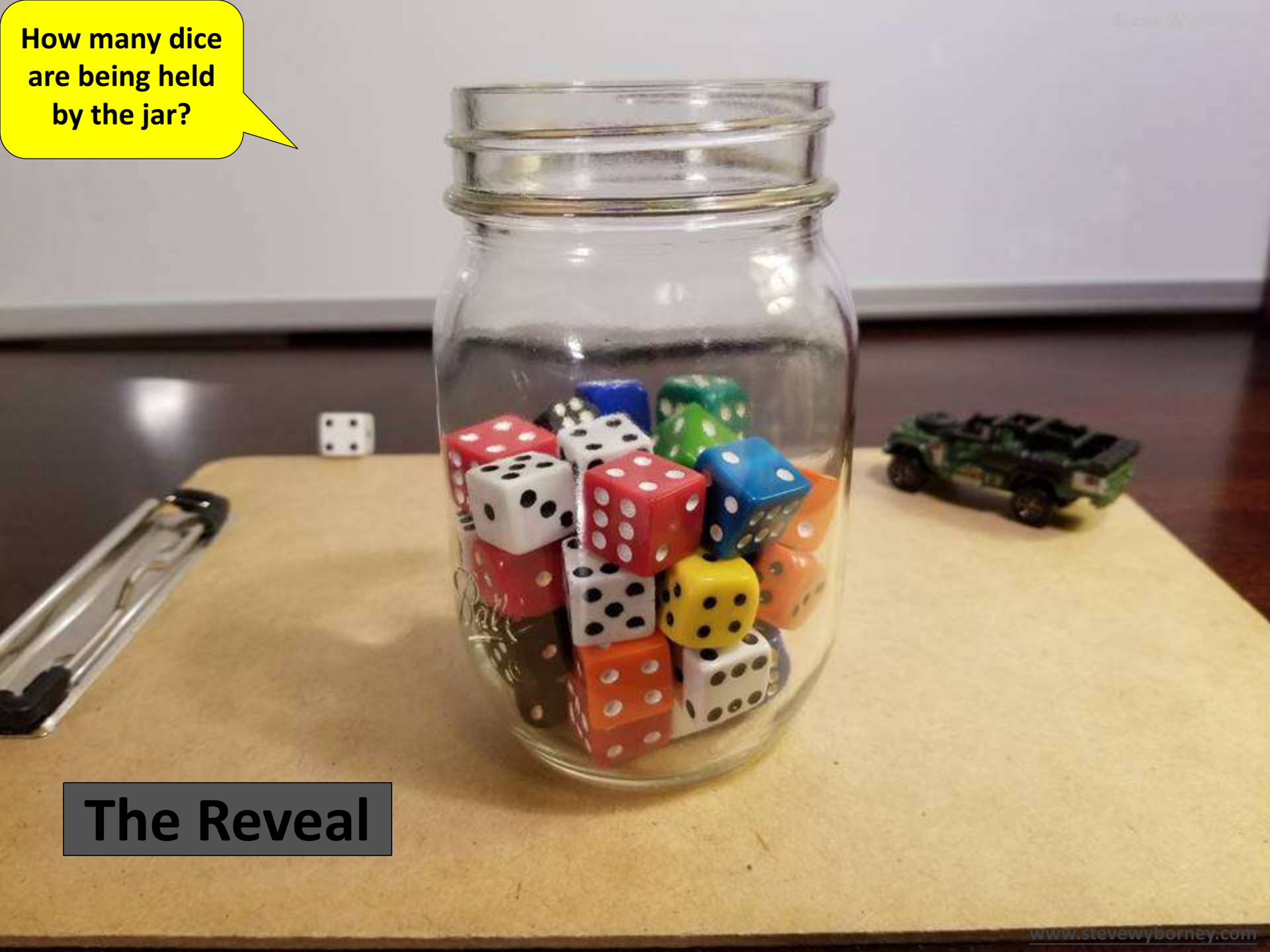

How many dice are being held by the jar?
The Reveal
www.stevewyborney.com


45 dice


The Reveal

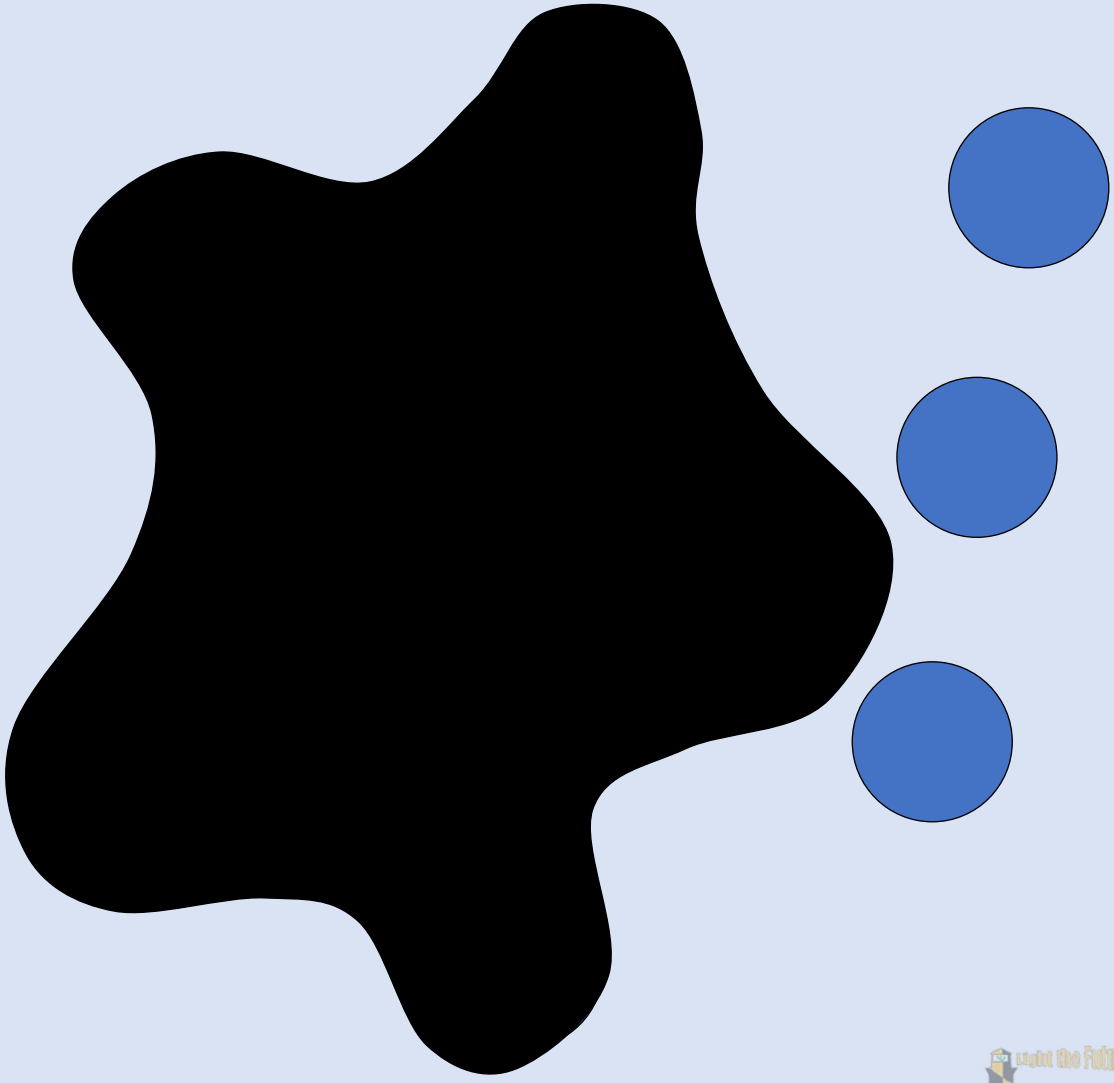

The Reveal


The Reveal
www.stevewyborney.com

Day 40

SPLAT!

8



How many blue shapes do you

Splat!

How many 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?