180 Days of
Number Sense Routines
Grade 1
Days 61-80

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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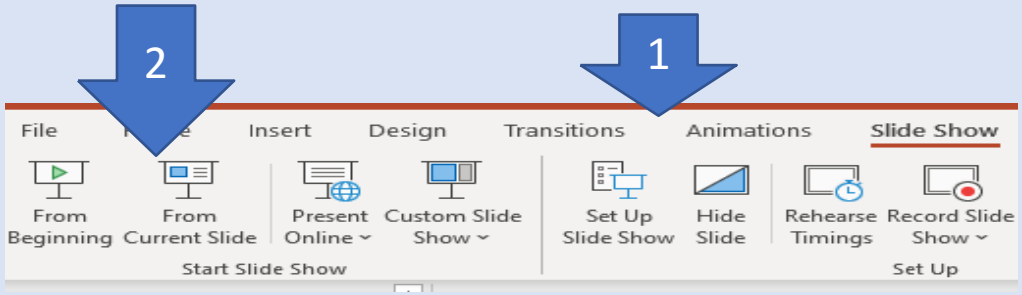
180 Days of
Number Sense Routines

HOW TO RUN POWERPOINT IN SLIDE SHOW MODE:

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

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



HOW TO ANNOTATE STUDENT THINKING ON THE SLIDE:

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

180 Days of
Number Sense Routines

Acknowledgements

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

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

Usage Rights

Count back by 5

Day 61

- Let's count backwards today by 5s.
- If we start at 100, what number is 5 less than 100? (95)
- We will count backwards together.
- As you count, I will circle the numbers on a chart.
- Watch the numbers that I circle. See if you notice any PATTERNS.

When you finish the count, look for and discuss the PATTERNS of the circled numbers.

Some patterns they may notice:

- Only numbers that have a 0 or a 5 in the ones place value are circled (this is big and exciting information to our first graders!)
- The circled numbers are found in the same two columns
- If we look at the numbers that we circled from top to bottom (instead of bottom to top) it is like skip-counting by 5's
  (again, an exciting connections for our students to discover)
- The tens place value of the numbers in the columns get greater by 1 ten if you look down the column and less by 1 ten if you track the column upward.
- There are two numbers on each row circled for every row

CHORAL COUNTING

Count back by 5

Day 61

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

CHORAL COUNTING

Day 62

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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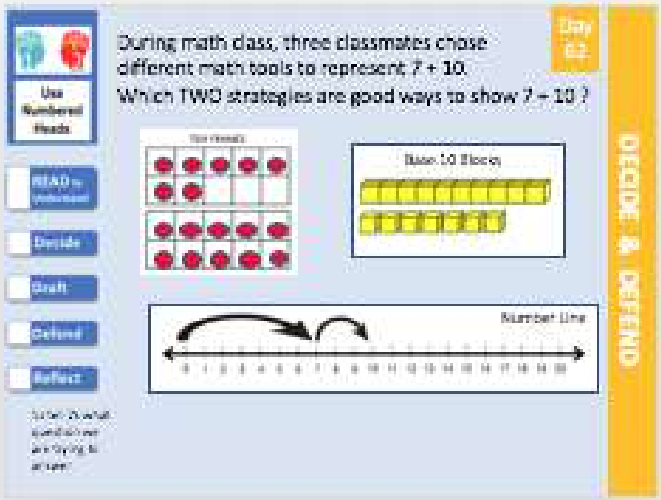
DECIDE & DEFEND

Use the NEXT SLIDE with students.

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

Day 62

DECIDE & DEFEND



- **TEN FRAME: Good strategy. This strategy shows 7 counters and 10 counters. This is a good way to show 7 + 10**
- **BASE 10 BLOCKS: Good strategy. This strategy shows a group of 10 unit cubes and 7 extra unit cubes. This is a good way to show 7 + 10. The order does not matter since addition is commutative (7+10 = 10+7).**
- **NUMBER LINE: This is NOT a good strategy. This student shows a jump of 7 and a jump of 3 (landing on the 10). The student should have shown a jump of 7 and a jump OF 10 (not TO 10) to represent 7 + 10.**

Use Numbered Heads

READ to Understand

Decide

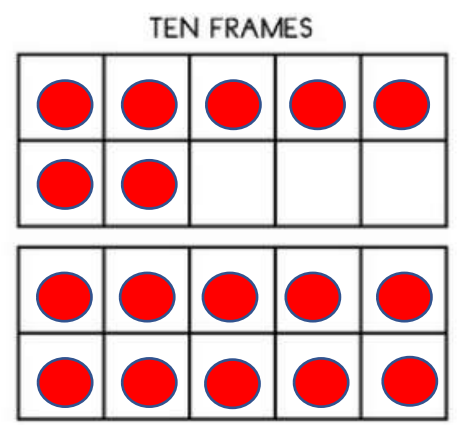
Draft

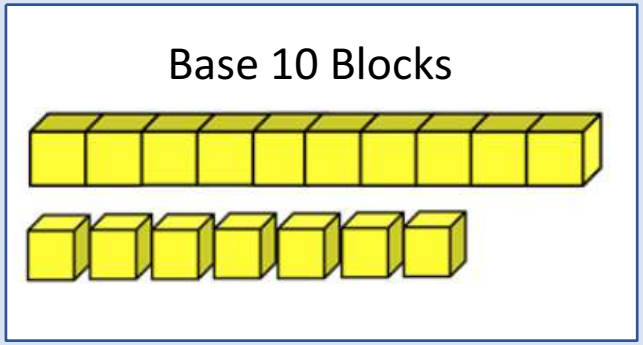
Defend

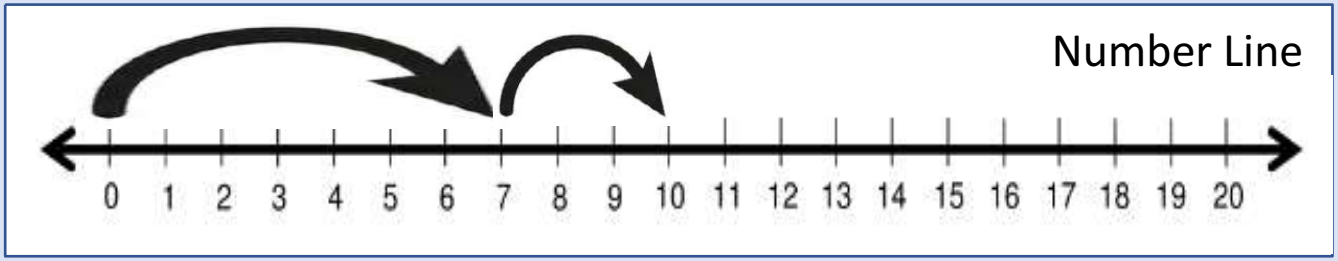
Reflect

Day 62

During math class, three classmates chose different math tools to represent 7 + 10.
Which TWO strategies are good ways to show 7 + 10 ?







DECIDE & DEFEND

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Day 62

Reflect on Learning

- A new math idea I learned today is…
- When you want to convince someone of your ideas, you should…
- To work carefully like a mathematician, I need to…

DECIDE & DEFEND

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Day 63

Estimation Activity

Have you already watched the teacher information video?

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

PROMPT: **How many marbles are in the bowl?**

ESTIMATION

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The Reveal

29 marbles

The Reveal

The Reveal

The Reveal

Day 64

8 + 1
18 + 1
8 – 1
18 – 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. Remember, students will come with a wide variety of strategies. Encourage student sharing of these strategies and work toward determining which of the ways were most efficient and brain-friendly. Students should be guided to do much of the talking during a Number Talk.

DURING

Plus/Minus 1

The following number talks help students to understand that adding and subtracting 1 is like counting forward and backward

Example: When counting, we count 6, 7, 8, 9 so one more than 7 is 8 and one more than 8 is 9

Remember, students will come with a variety of strategies. 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

After solving the expressions with various strategies, help students to understand how adding one works the same way that counting does and that subtracting one is like counting backwards.

NUMBER TALK

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Day 64

NUMBER TALK

8 + 1

18 + 1

8 – 1

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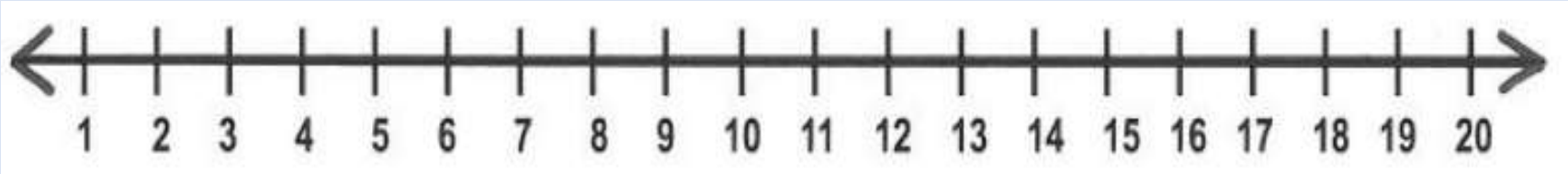
GOAL: Use the number line as a tool when working with numbers.

Day 65

OPEN NUMBER LINE



Ask each question below. Take time with each question to allow students to explain "how they know".

- What number is 1 MORE than 8?
- What number is 1 LESS than 11?
- What number is 2 more than 14?
- What number is 2 less than 7?
- Imagine we extend this number line. What number is 2 MORE than 19?
- What number is 10 LESS than 16?
- What number is 10 MORE than 1?

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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 (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.**
   After 3-5 seconds, advance the slide to hide the image.
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 without hiding it so they can 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 describe the shortcut counting strategy they used. Give time for partner discussions. Listen in 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. This 2-step process is important for building listening comprehension and students' ability to articulate the ideas of others.
   a. Use your notes to select different students with different approaches.
   b. The student explains his/her shortcut as the teacher **gestures** over the image.
   c. 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.
   d. Repeat the process using different student-generated shortcut strategies.
10. End by asking students to explain what was "mathematically important"

Use the NEXT SLIDE with students.

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

Day 66

QUICK COUNT

1st VIEWING:

- Pair students into Numbered Heads (or Peanut Butter Jelly partners, etc.)
- Show students the first image slide for about 3-5 seconds
- With their partner, students discuss everything they can remember about the image.

2nd VIEWING GOAL: Students find various short cuts for determining the total.
Help students begin to move away from "counting each"

POSSIBLE RESPONSES:

- 3 bales + 4 bales + 4 bales = 11 hay bales
- 1 + 2 + 4 + 2 + 2 = 11 hay bales
- 7 bales + 4 bales = 11 bales

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Day 66

Today, our Number Sense Routine is going to ask us to count round bales of hay. These are pictures of the equipment that farmers use to make those round bales of hay. Do you see the bales of hay being made?

QUICK COUNT

Day 66

A farmer used a tractor to cut and roll these bales of hay on her field.

What do you NOTICE?

QUICK COUNT

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Day 66

QUICK COUNT

What did you NOTICE?

Day 66

QUICK COUNT

How many bales do you see?

What counting shortcut did you use?

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I noticed ____ so I _____

(They) noticed ____ so they___

Day 66

QUICK COUNT

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Day 66

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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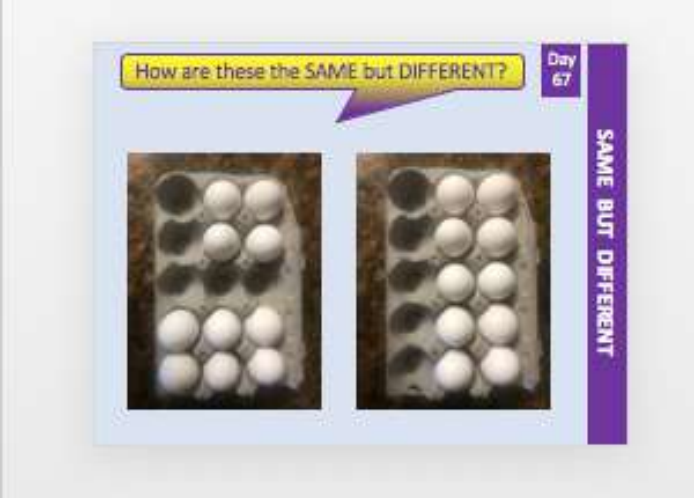
Day 67

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 total of 10 eggs.
- Both are in the same carton.
- Both have white eggs.
- Both have 5 missing eggs.
- Both containers can hold 15 eggs.
- LEFT is grouped into 4 and 6
- RIGHT is a group of 10 or 2 groups of 5

SAME BUT DIFFERENT

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How are these the SAME but DIFFERENT?

Day 67

SAME BUT DIFFERENT

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How many blue shapes do you

Splat!

How many shapes are under the splat? How do

How else could

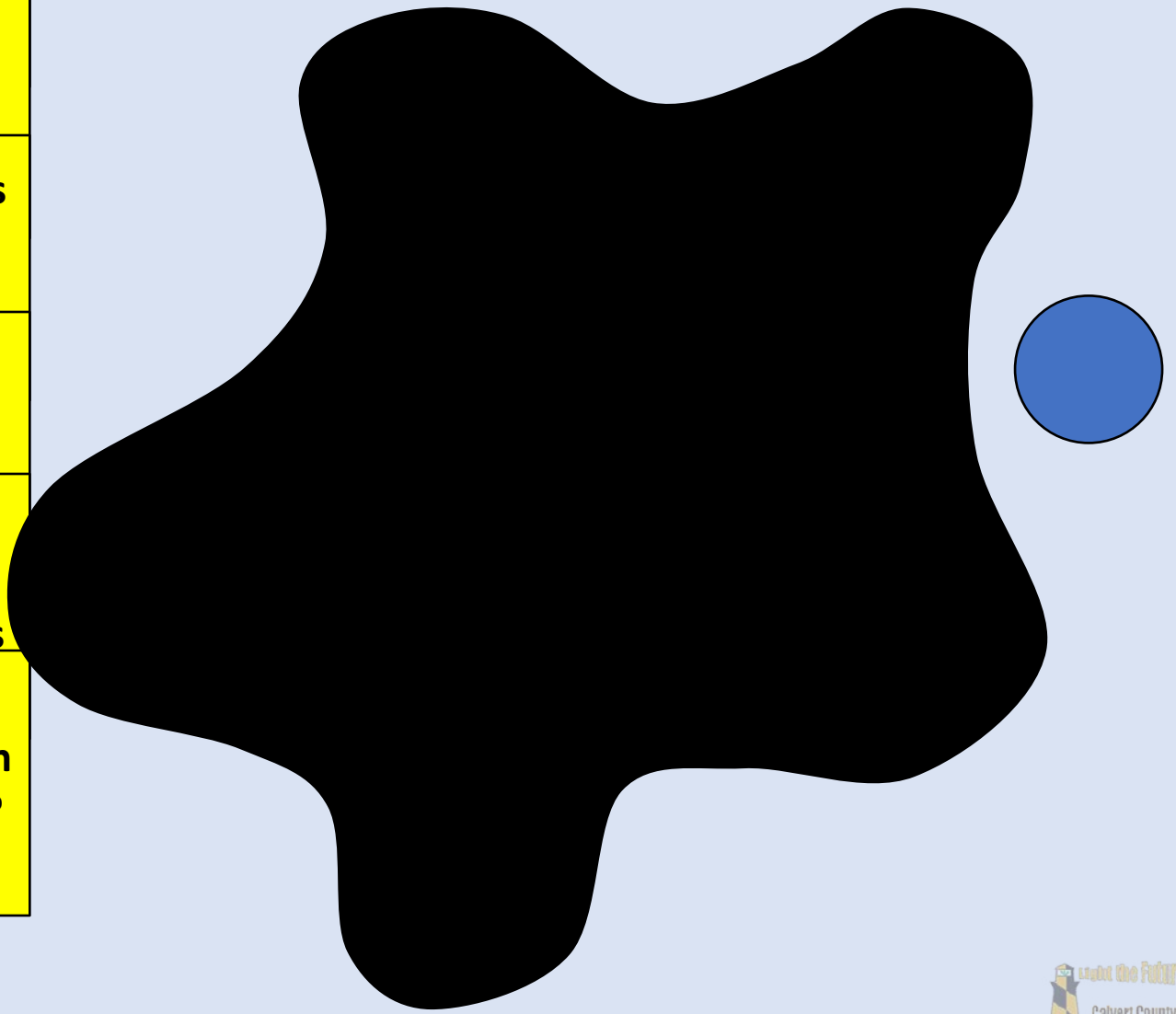
Let's look under the splat to see how many shapes

What can we learn from this picture?

10

Day 68

SPLAT!

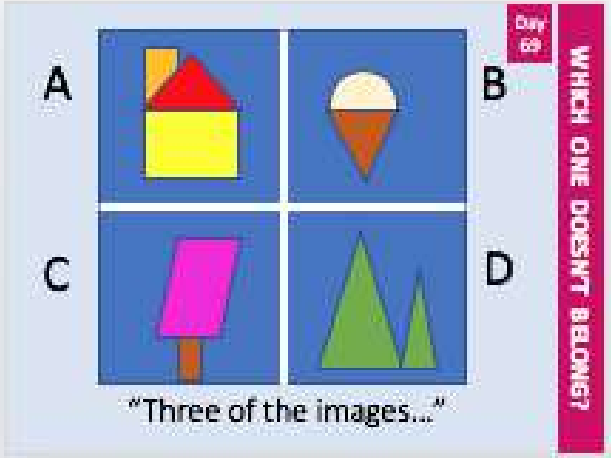


Use the NEXT SLIDE with students.

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

Day 69

WHICH ONE DOESN'T BELONG?

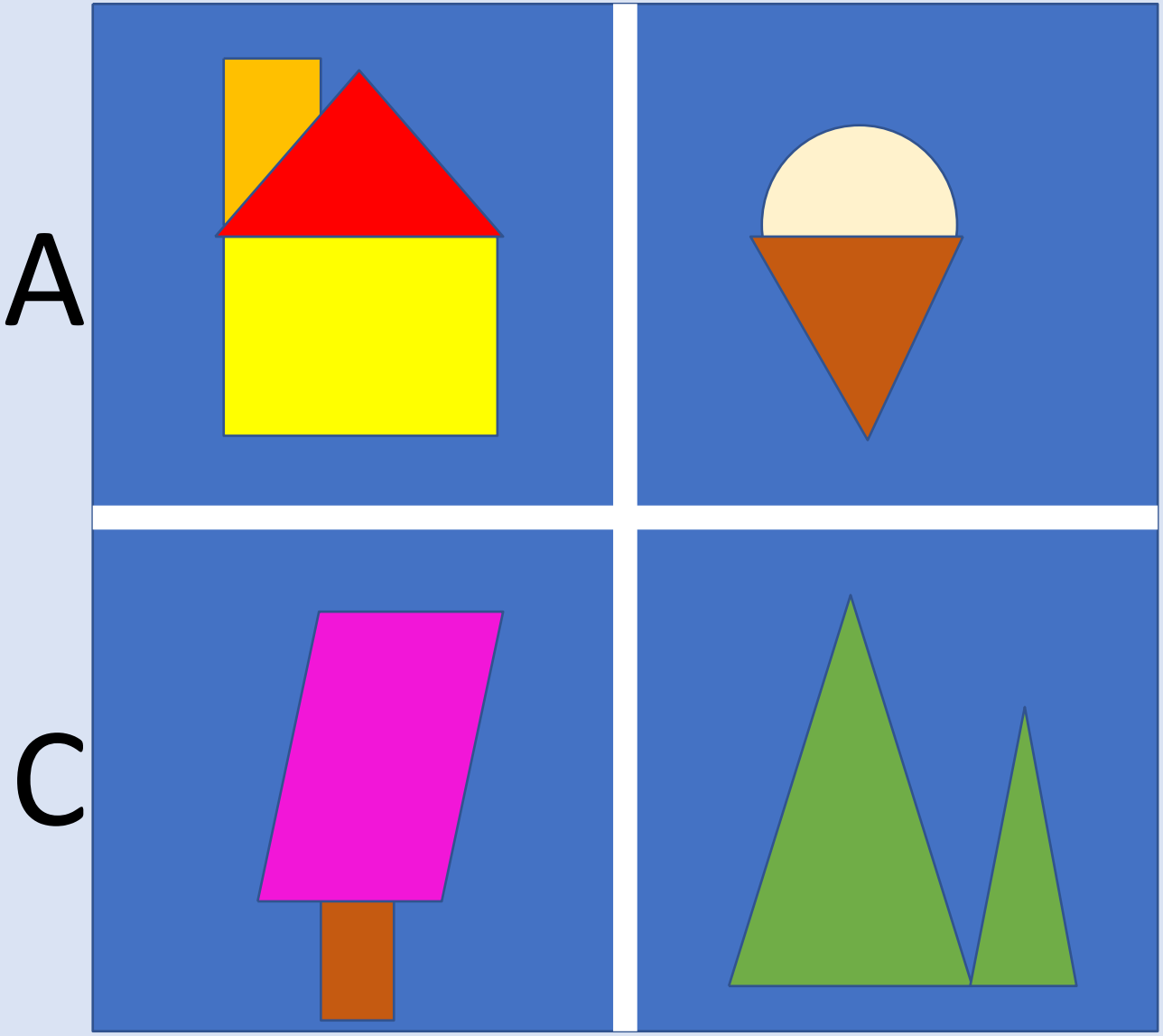


Possible Responses:

- Three of the images are pictures made from 2 shapes. **Image A** is not made form 2 shapes; it is made from 3 shapes (trapezoid, rectangle, and triangle)
- Three of the images only use shapes that have straight edges. **Image B** uses a semi-circle with a curved edge.
- Three of the images have at least one triangle. **Image C** does not have any triangles.
- Three of the images are made from more than one kind of geometric shape. **Image D** is just one type of shape (triangles)

Day 69

WHICH ONE DOESN'T BELONG?



"Three of the images…"

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Day 70

10 More Starting from 7

- Let's count together by 10s
- As we count, I will chart the numbers we say, so we'll have to go slow and count together so I can chart your responses.
- We are not going to start on 10. Let's challenge ourselves and begin on 7.
- What number is 10 more than 7? (17)
- What number is 10 more than 17? (27)
- If this chart were extended, what number would we circle next after 117? (127) How do you know?

- **DISCUSS the PATTERNS that students noticed**.
- How would this activity be the same/different if we had started on the number 8, instead of 7?

CHORAL COUNTING

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Day 70

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

10 More starting from 7

CHORAL COUNTING

Day 71

Estimation Activity

Have you already watched the teacher information video?

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

PROMPT: **How many marbles are in the cup?**

ESTIMATION

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The Reveal

37 marbles

The Reveal

The Reveal

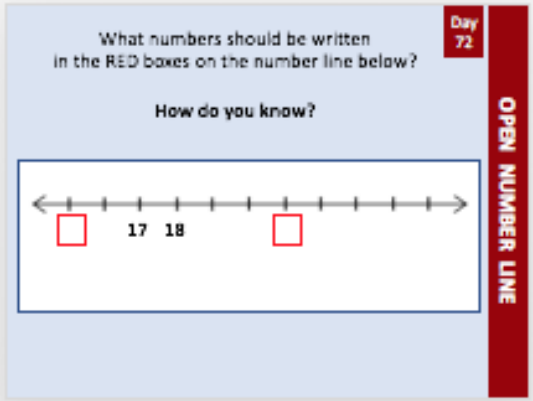
The Reveal

Use the NEXT SLIDE with students.

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

Day 72

OPEN NUMBER LINE



Correct responses: 15 and 21

Use the Numbered Head Strategy to have pairs of students discuss the missing numbers. Instruct them to talk about HOW THEY KNOW while talking with their partner.
Once students have had time to discuss with partners, discuss their ideas as an entire class. Resist the urge to correct students – let them talk – right or wrong, when the first student finishes sharing his/her ideas, ask another student to share. Encourage students to listen and to respond to classmates ideas. An excellent strategy to encourage peer-to-peer discussion is to post sentence starters and to require students to begin by using a sentence starters.

Sample Sentence Starters:

- I agree with _____'s idea because…
- I have a question about ____'s idea…
- My idea is similar to ____'s idea because we both thought…
- My idea is different than ____'s ideas because I thought…

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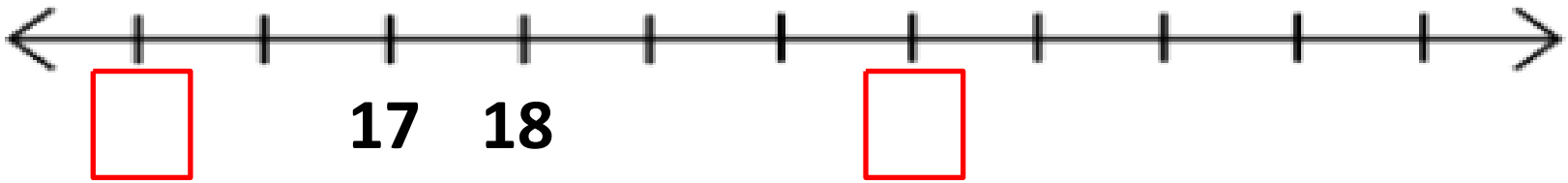
Day 72

What numbers should be written in the RED boxes on the number line below?

How do you know?



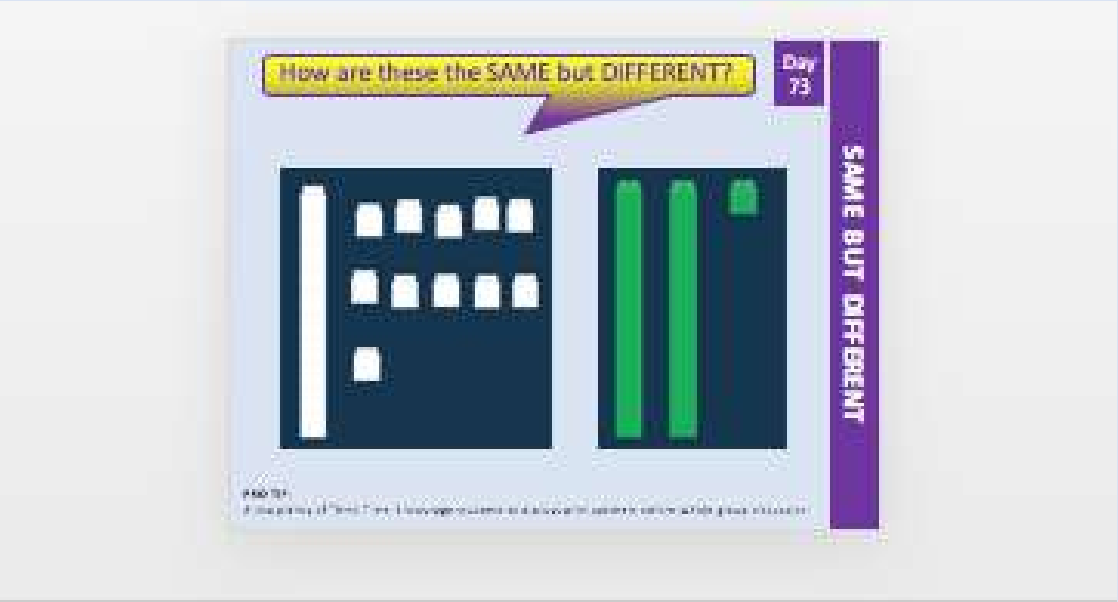
OPEN NUMBER LINE

Day 73

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 21
- Both use snap cubes (Unifix cubes) represent the number
- White cubes vs. green cubes
- WHITE: 1 joined group of 10 and 11 ones
- GREEN: 2 joined groups of 10 and 1 one

SAME BUT DIFFERENT

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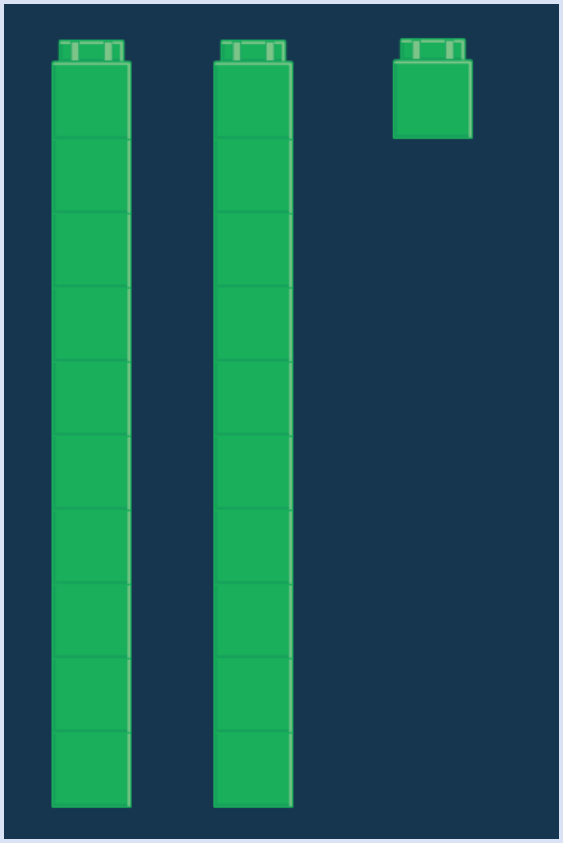
How are these the SAME but DIFFERENT?

Day 73

SAME BUT DIFFERENT



PRO TIP:
Allow plenty of Think Time.
Encourage students to discuss with partners before whole group discussion.

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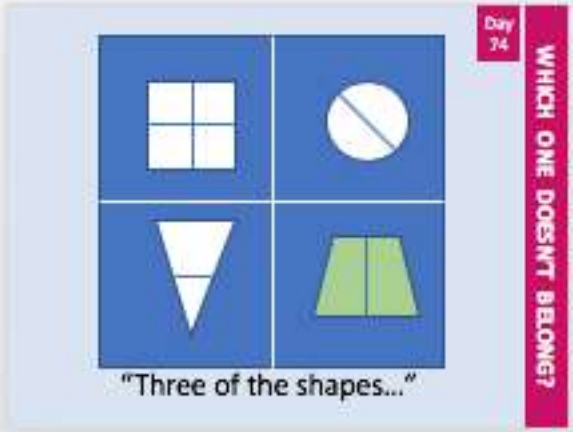
Use the NEXT SLIDE with students.

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

Day 74

WHICH ONE DOESN'T BELONG?



Remember to help students to formulate responses that CONNECT 3 of the images together with a common attribute. Using the sentence starter shown helps to ensure that students are focusing on the LIKE attributes.

Possible Responses:

- Three of the shapes are partitioned (cut) into two parts. The **SQUARE** is partitioned into 4 parts.
- Three of the shapes are partitioned into EQUAL parts. The **TRIANGLE** is not partitioned equally.
- Three of the shapes have straight edges. The **CIRCLE** has curved edges.
- Three of the shapes are shaded white. The **TRAPEZOID** is not shaded white.

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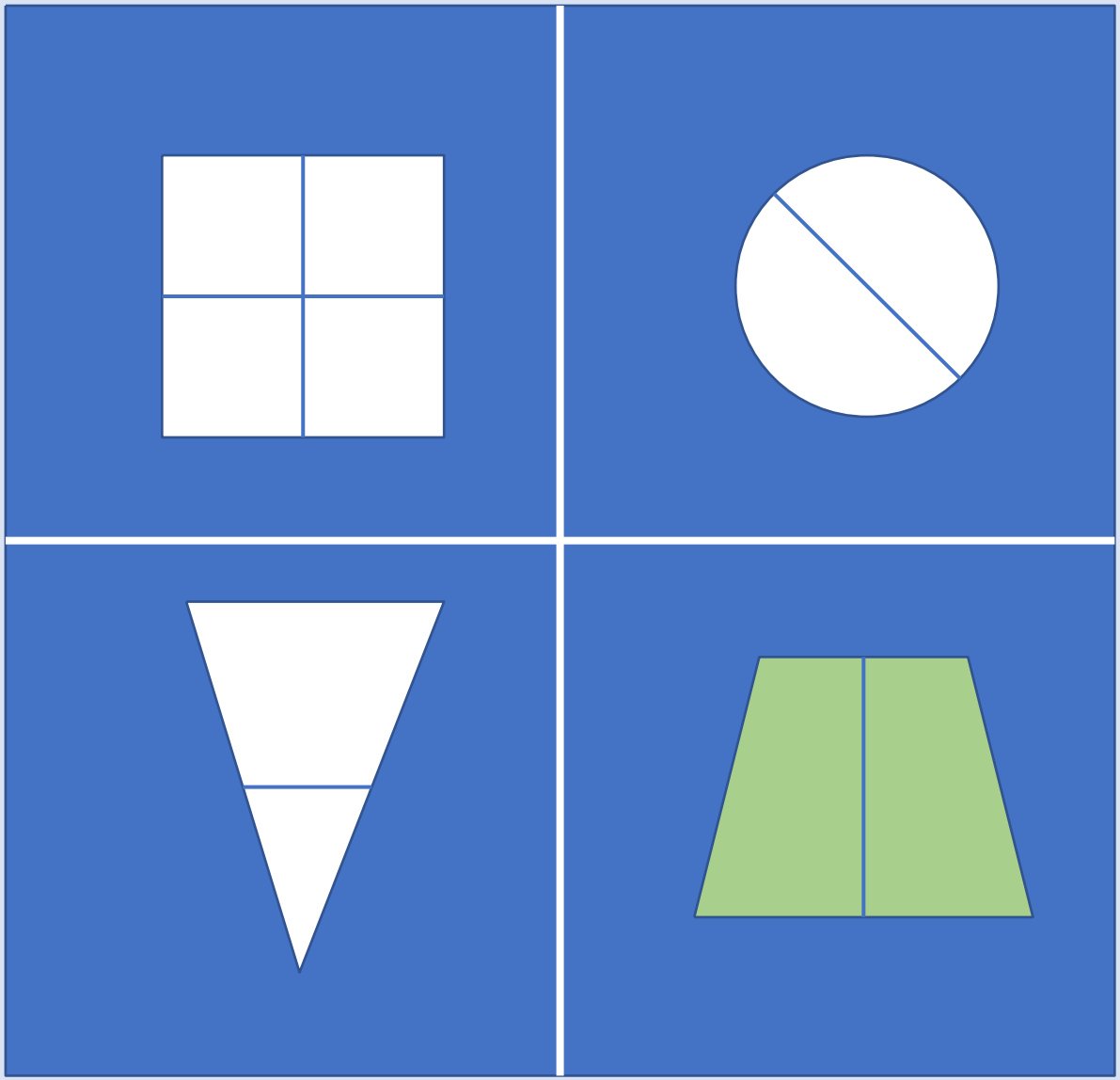
Day 74

WHICH ONE DOESN'T BELONG?



"Three of the shapes…"

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Day 75

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

DECIDE & DEFEND

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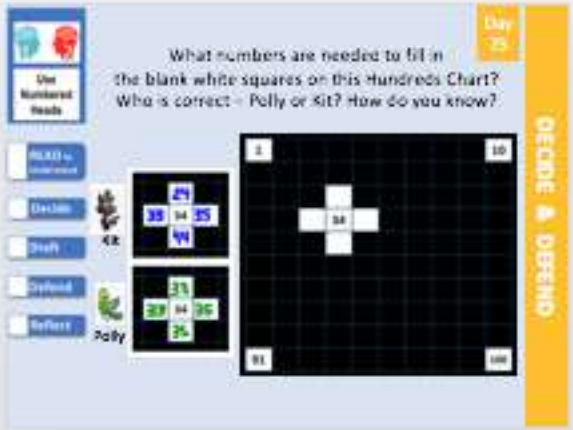
Use the NEXT SLIDE with students.

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

Day 75

DECIDE & DEFEND



Remember to go through this routine step-by-step – checking off each step as you go.
Encourage students to discuss ideas with a partner before the whole class discussion of ideas.

Kit is correct. Help students to recognize that on a Hundreds Chart, the number above are 10 less and the numbers below are 10 more.
Left and right neighboring numbers are 1 less and 1 more.

Day 75

Use Numbered Heads

READ to Understand

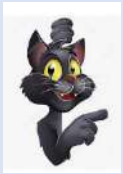
Decide

Draft

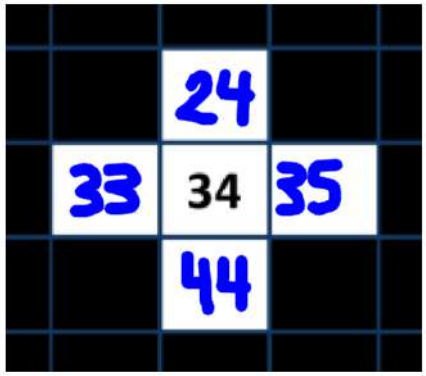
Defend

Reflect

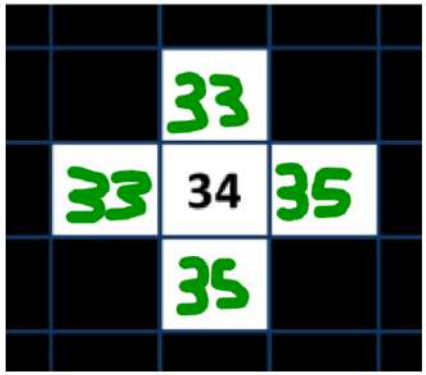
What numbers are needed to fill in the blank white squares on this Hundreds Chart? Who is correct – Kit or Polly? How do you know?

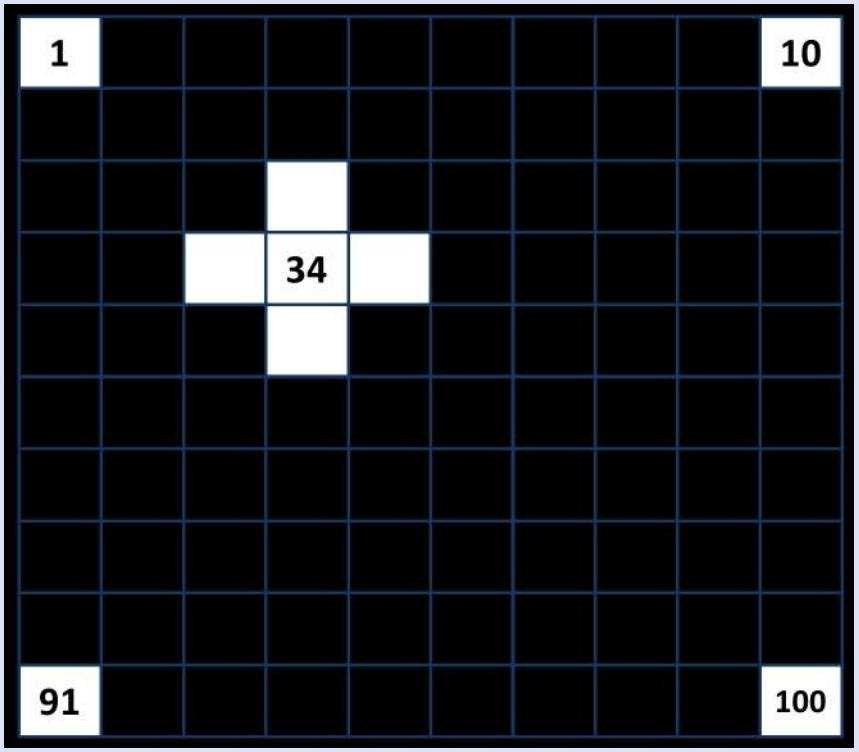


Kit



Polly





DECIDE & DEFEND

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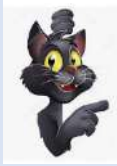
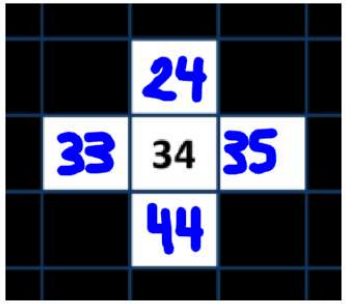
Day 75

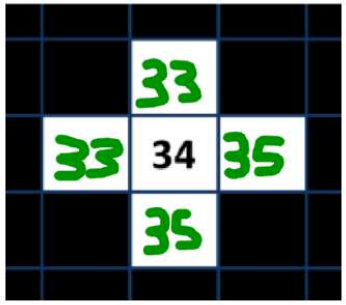
Reflect on Learning



Kit



Polly



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

DECIDE & DEFEND

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Reflect on Learning

Day 75

- A new math idea I learned today is…
- When you want to convince someone of your ideas, you should…

DECIDE & DEFEND

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Day 76

9 + 2
16 + 2
9 – 2
16 – 2

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. Encourage student sharing of these strategies and work toward determining which of the ways were most efficient and brain-friendly. Students should be guided to do much of the talking during a Number Talk.

DURING

Plus/Minus 2

The following number talks help students to understand that adding and subtracting 2 is like counting forward two numbers or backward two numbers.

Example: When counting, we count 5, 6, 7, 8, 9 so two more than 7 is 9 and and two less than 7 is 5

Remember, students will come with a variety of strategies. 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

After solving the expressions with various strategies, help students to understand how adding 2 can be easily done by "counting on 2" and subtracting 2 is the same as "counting back 2".

NUMBER TALK

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Day 76

NUMBER TALK

9 + 2

16 + 2

9 – 2

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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 77

QUICK COUNT

- Show students the first image. Have then Notice. Then have them talk with a partner about what they noticed. Do not offer any "look for" hints at this point. Just let them notice.
- 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…)
- Show the image again and leave it displayed as students look for counting shortcuts.
- 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.

GOAL: Help students to discover the efficiency of skip-counting. Move students to an understanding that counting one-by-one is not efficient.

Possible Responses:

- Students will likely count the first stack to discover that there are 10 on the stack. They may recognize that each stack is identical and then skip-count by 10s: 10, 20, 30, 40
- Students may try to count 1 by 1 – allow it so students can see/feel how inefficient counting 1-by-1 can be
- Some students may try to count by color.

Day 77

What do you NOTICE?

QUICK COUNT

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Day 77

QUICK COUNT

What did you NOTICE?

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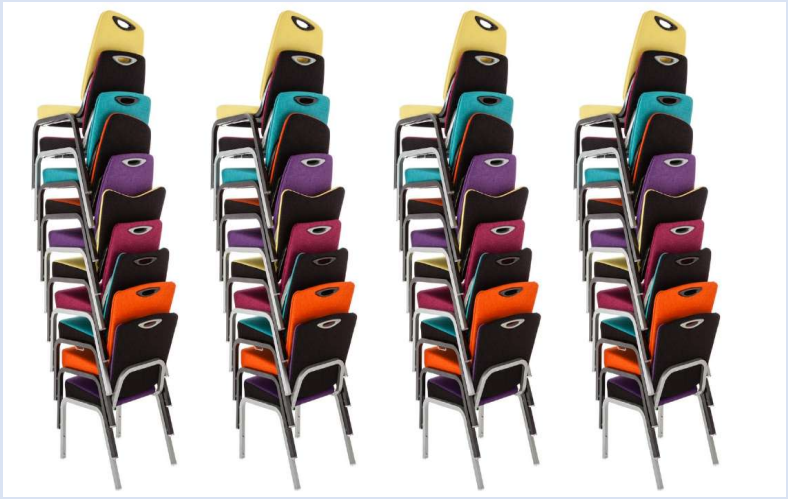
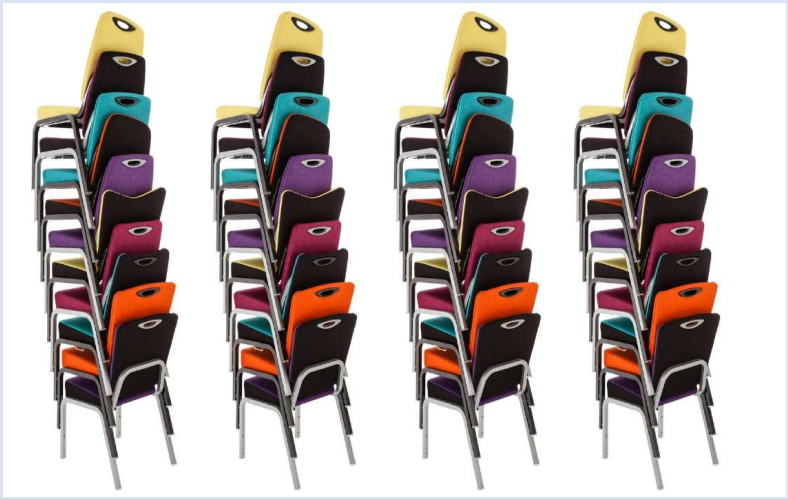
Day 77

QUICK COUNT

I noticed _____ so I _____



(They) noticed _____ so they _____



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Day 77

Reflect

What was mathematically important?

QUICK COUNT

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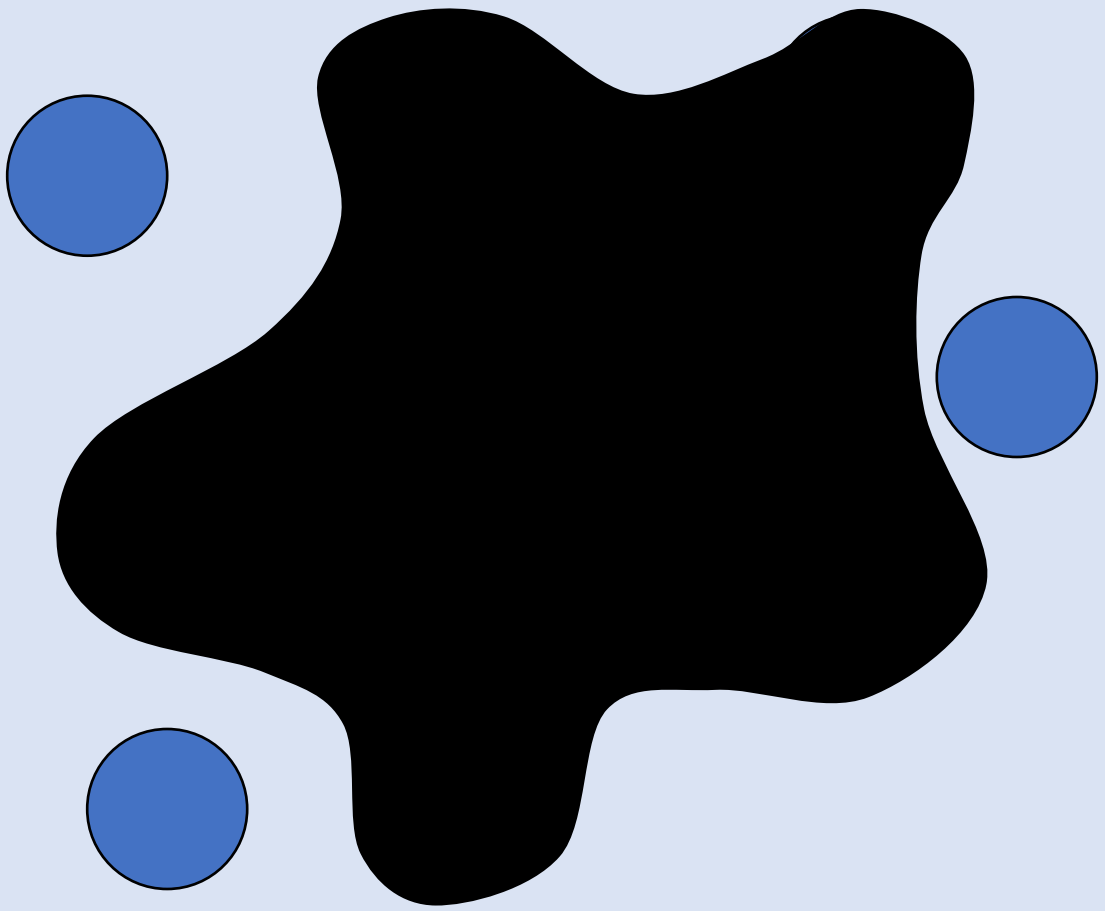
Day 78

SPLAT!

9



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?

Day 79

10 More Starting from 4

- Let's count together by 10s
- As we count, I will chart the numbers we say, so we'll have to go slow and count together so I can chart your responses.
- We are not going to start on 10. Let's challenge ourselves and begin on 4.
- What number is 10 more than 4? (14)
- What number is 10 more than 14? (24)
- If this chart were extended, what number would we circle next after 114? (124) How do you know?

- **DISCUSS the PATTERNS that students noticed**.
- How would this activity be the same/different if we had started on the number 3, instead of 4?

CHORAL COUNTING

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Day 79

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

10 More starting from 4

CHORAL COUNTING

Day 80

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. This activity is focused on the concept of 10 More and 10 Less. Give students an opportunity to discuss and explore this concept. Be patient, as students learn the PATTERNS of mathematics as it relates to 10 More and 10 Less. Throughout the activity, help students to see the patterns that exist among the numbers.

DURING

+/-10

TEN MORE

- What is 10 MORE than 14? (24) – circle 14 on the chart
- What is 10 MORE than 30? (40) – circle 19 on the chart
- What is 10 MORE than 22? (32) – circle 42 on the chart
- What is 10 MORE than 56? (66) – circle 66 on the chart
- ASK: Look at the numbers that we circled. What PATTERNS do you see with the numbers that are 10 MORE?
    - The circled number is directly below the original number
    - The ONES place value is the same in the original number and the 10 MORE number
    - The TENS place value is 1 digit greater than the original number

Erase the circled numbers on the chart. Say, 'Now we are going to focus on TEN LESS.'

TEN LESS

- What is 10 LESS than 14? (4) – circle 14 on the chart
- What is 10 LESS than 30? (20) – circle 19 on the chart
- What is 10 LESS than 22? (12) – circle 42 on the chart
- What is 10 LESS than 56? (46) – cicrcle 66 on the chart
- ASK: Look at the numbers that we circled. What PATTERNS do you see with the numbers that are 10 LESS?
    - The circled number is directly above the original number
    - The ONES place value is the same in the original number and the 10 LESS number
    - The TENS place value is 1 digit less than the original number

AFTER

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

Day 80

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

NUMBER TALK

Light the Future
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