Chris Zarski

Central Alberta Regional Consortium
Working Together: Making a Difference

Land Acknowledgment

We respectfully acknowledges that we are situated on Traditional lands across the province of Alberta home to many First Nations, including the Cree, Blackfoot, Métis, Nakota Sioux, Saulteaux, Inuit, and many others whose histories, languages, and cultures continue to influence our vibrant community.

March	April
Number: Quantity is measured with numbers that enable counting, labelling, com	
2N1.3 Students analyze quantity to 1000 (500 on). • All natural numbers are either even or odd. 2N1.4 Students analyze quantity to 1000. • A quantity can be estimated when an exact count is not needed. 2N2.1 Students investigate addition and subtraction within 100. • A sum can be composed in multiple ways. 2N2.2 Students investigate addition and subtraction within 100. • Addition and subtraction can represent the sum or difference of countable quantities or measurable lengths.(with and without regrouping)	2N1.3 Students analyze quantity to 1000.(500 on). • All natural numbers are either even or odd. 2N1.4 Students analyze quantity to 1000. • A quantity can be estimated when an exact count is not needed. 2N2.1 Students investigate addition and subtraction within 100. • A sum can be composed in multiple ways. 2N2.2 Students investigate addition and subtraction within 100. • Addition and subtraction can represent the sum or difference of countable quantities or measurable lengths.
Patterns: Awareness of patterns supports problem solving in various situations.	

Money
Counters
Number line

Money
Cuisenaire Rods
Base 10 blocks
symbolic

May	June
nparing and operating.	
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Money APP

Using Base 10

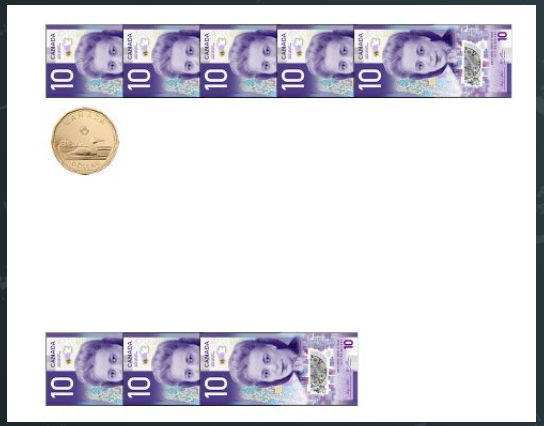
What number combinations are your students able to complete at this point?

Show $81 three different ways

You choose

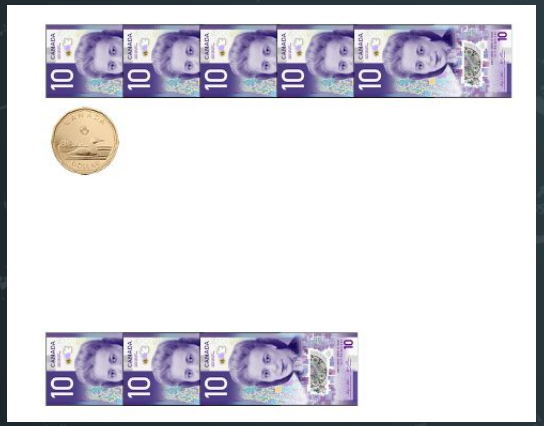
Where one of the number is 29

Where one of the number is 47

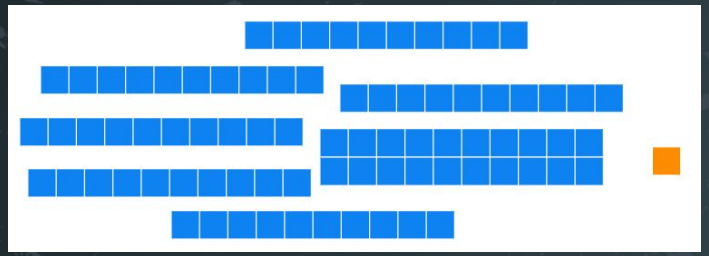


What number combinations are your students able to complete at this point?

You choose



How would these same questions appear on the deci tracks? ... Base 10 Blocks?



Same addition questions only students have input. Differentiate cards and dominos based on level of ability.

Halves and Quarters - how does this look (model)

2N3.1 Students interpret part whole relationships using unit fractions.

- Fractions can represent part-to-whole relationships.
- One whole can be interpreted as a number of unit fractions.

So what is a “unit fraction”?

In what ways can parts compose a whole?

2N3 Students interpret part-whole relationships using unit fractions.

Knowledge	Understanding	Skills & Procedures
A whole can be a whole set of objects, or a whole object, that can be partitioned into a number of equal parts. The whole can be any size and is designated by context. A unit fraction describes any one of the equal parts that compose a whole.	Fractions can represent part-to-whole relationships. One whole can be interpreted as a number of unit fractions.	Model a unit fraction by partitioning a whole object or whole set into equal parts, limited to 10 or fewer equal parts. Compare different unit fractions of the same whole, limited to denominators of 10 or less. Compare the same unit fractions of different wholes, limited to denominators of 10 or less. Model one whole, using a given unit fraction, limited to denominators of 10 or less.


0
10¢
1/10
20¢
2/10
30¢
3/10
40¢
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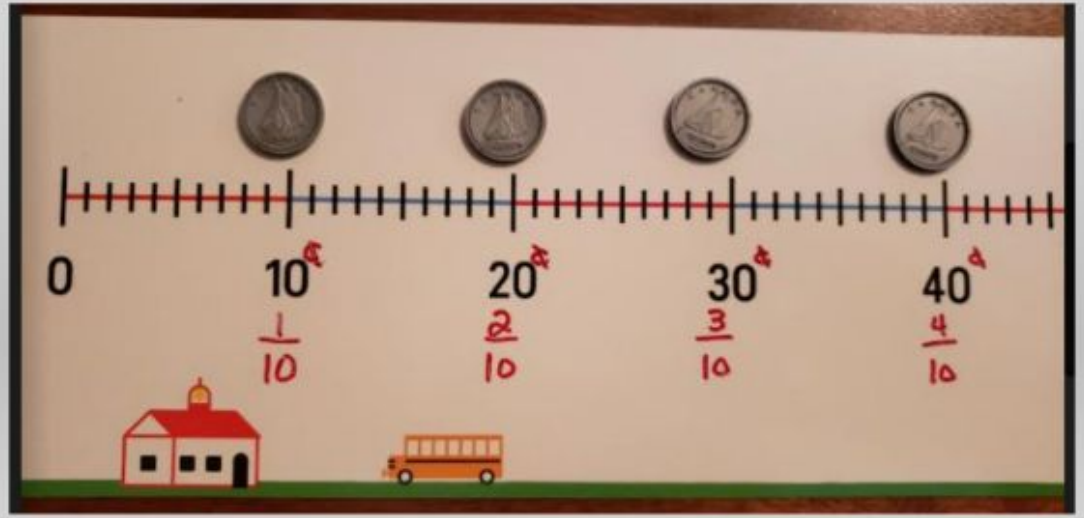
5/10
60¢
6/10
70¢
7/10
80¢
8/10
90¢
9/10
100¢
10/10


0
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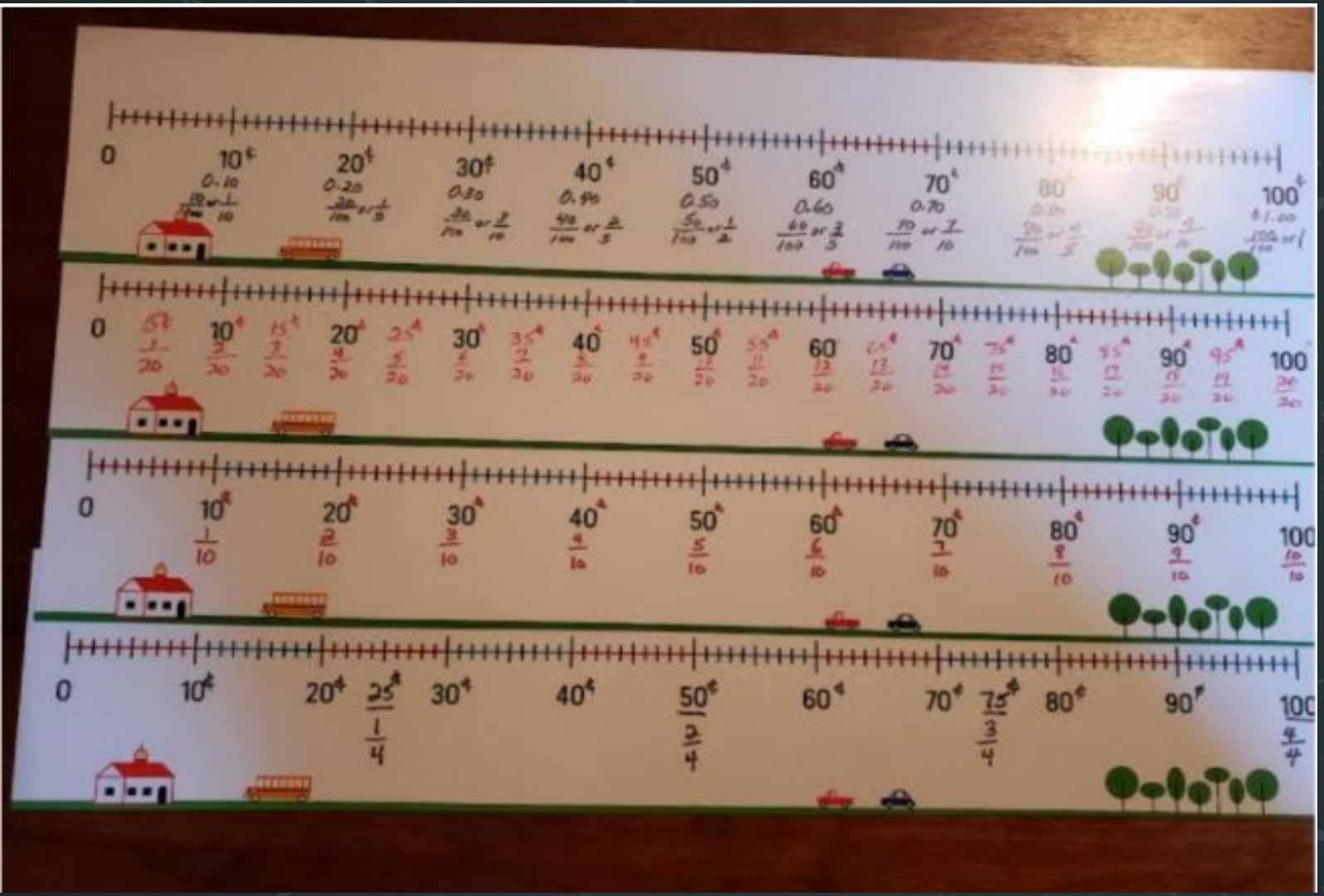
3/10
40¢
4/10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80¢
90¢
100¢

In what ways can parts compose a whole?

2N3 Students interpret part-whole relationships using unit fractions.

Knowledge	Understanding	Skills & Procedures
A whole can be a whole set of objects, or a whole object, that can be partitioned into a number of equal parts. The whole can be any size and is designated by context. A unit fraction describes any one of the equal parts that compose a whole.	Fractions can represent part-to-whole relationships. One whole can be interpreted as a number of unit fractions.	Model a unit fraction by partitioning a whole object or whole set into equal parts, limited to 10 or fewer equal parts. Compare different unit fractions of the same whole, limited to denominators of 10 or less. Compare the same unit fractions of different wholes, limited to denominators of 10 or less. Model one whole, using a given unit fraction, limited to denominators of 10 or less.

Be intentional that the context is real and the shape is something that could be folded/cut into the designated parts.

What are 'good' denominators to consider?

What are unit fractions of the orange rod? Of the dark green?

What does this mean?

Puzzle pieces
Mathigon.org
Go to Fraction circles in Fractions
***remember the North American obsession with circles!

2G1.2 Students analyze and explain geometric attributes of shape.

- Geometric attributes do not change when a shape is translated, rotated, or reflected.

Terminology: Reflection, Translation and Rotation.

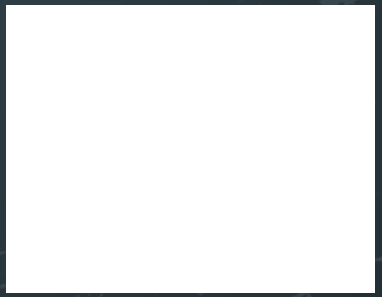
Interactive Maths

Transformations - Level 1

Smashmaths - go to section 2 & 3 *Shapes in Motion*

Brainingcamp.com
TEACHER23

Grid paper and Tissue paper



May	June
orm understanding and decision making.	
2ST1.1 Students relate data to a variety of representations. • Data can be collected to answer questions. 2ST1.2 Students relate data to a variety of representations. • Data can be represented in various ways.	2ST1.1 Students relate data to a variety of representations. • Data can be collected to answer questions. 2ST1.2 Students relate data to a variety of representations. • Data can be represented in various ways.

How can data inform representation?

2ST1.1 Students relate data to a variety of representations.

Knowledge	Understanding	Skills & Procedures
Data can be collected by asking questions. First-hand data is data collected by the person using the data.	Data can be collected to answer questions.	Generate questions for a specific investigation within the learning environment. Collect first-hand data by questioning people within the learning environment.

2ST1.2 Students relate data to a variety of representations.

Knowledge	Understanding	Skills & Procedures
Data can be recorded using tally marks, words, or counts Data can be expressed through First Nations, Métis, or Inuit stories. A graph includes features such as • a title • a legend • axes • axis labels Data can be represented with graphs such as • pictographs • bar graphs • dot plots	Data can be represented in various ways.	Record data in a table. Construct graphs to represent data. Interpret graphs to answer questions. Compare the features of pictographs, dot plots, and bar graphs.

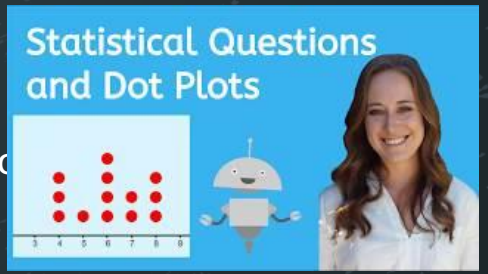
Grade 3

Statistics: The science of collecting, analyzing, visualizing and interpreting data can inform understanding and decision making.

3ST1.1 Students interpret and explain representations of data.. • Representation connects data to a statistical question. 3ST1. 2 Students interpret and explain representation. • Representation expresses data specific to a unique time and place. • Representation tells a story about data. Could be addressed throughout the year in science as well.	3ST1.1 Students interpret and explain representation of data. • Representation connects data to a statistical question. 3ST1. 2 Students interpret and explain representation. • Representation expresses data specific to a unique time and place. • Representation tells a story about data. Could be addressed throughout the year in science as well.

What makes a good statistical question?

Intro to Statistical Questions and Dot Plots: more terminology than needed for grade 3 but appropriate to understand the information being exemplified. An easy one to stop and discuss along the way.

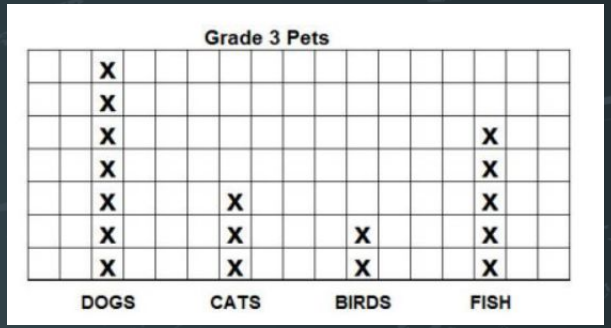


What good statistical question could we ask?

Our Favourite Sports

Sport	Tally	Number of Students
Hockey	𝍸 I	6
Soccer	𝍸	5
Basketball	IIII	4
Gymnastics	II	2

What is the most favorite sport of students in our Grade 2class?

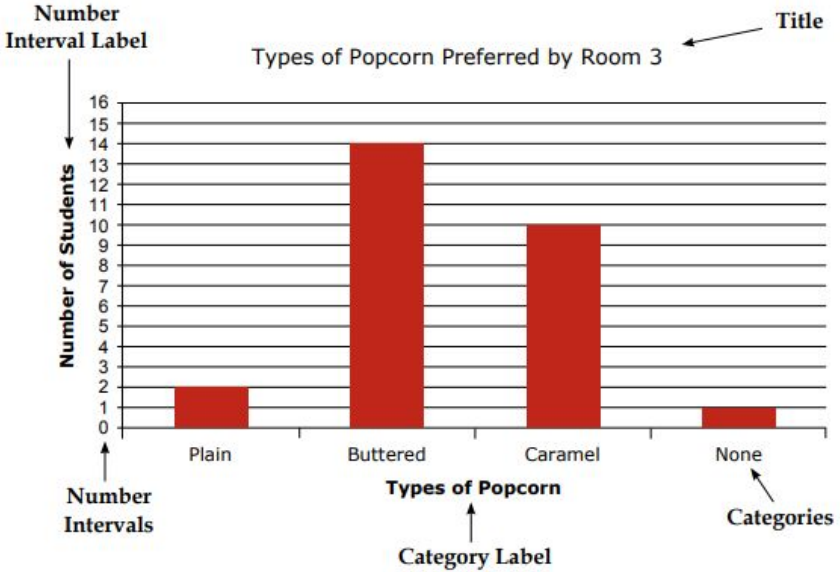


What is the most common type of pet owned by Grade 3 students?

What other questions could be generated?

Bar Graph: A bar graph is a graph that uses horizontal or vertical bars to display data.

Example:



A bar graph needs the following labels:

- title
- categories
- category label
- number intervals (Note: Numbers are labelled on the line not the space.)
- number interval label

Generally the data graphed at the elementary level is discrete data (data attained by counting in whole numbers). In this case, there are always spaces left between the bars.

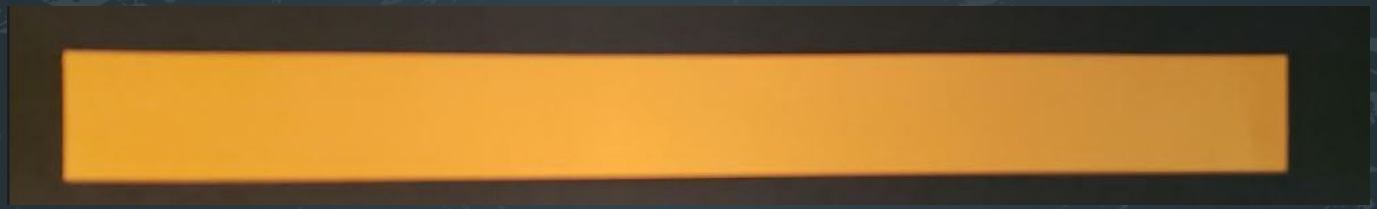
Important components of a graph.

Could you tie a Financial Literacy activity into a Statistical questions and data collection for analysis?

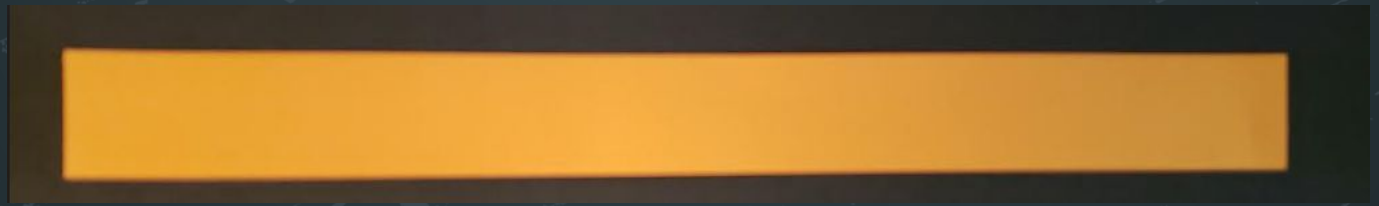
At the Store
Goods and Services
Where Do You Go Shopping?

- Create a fraction strip that has eighths
- Create a fraction strip that has 10 pieces (tenths)
- sixths

Model - let's do eighths.

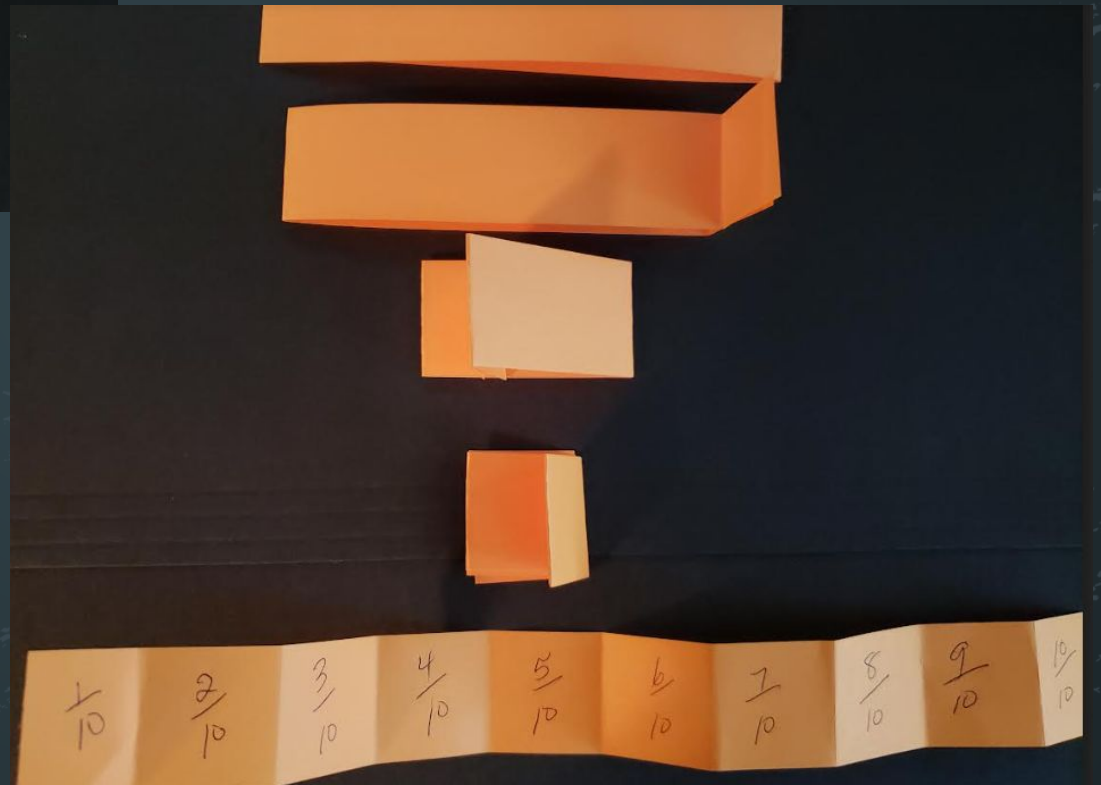


This strip to be turned into tenths



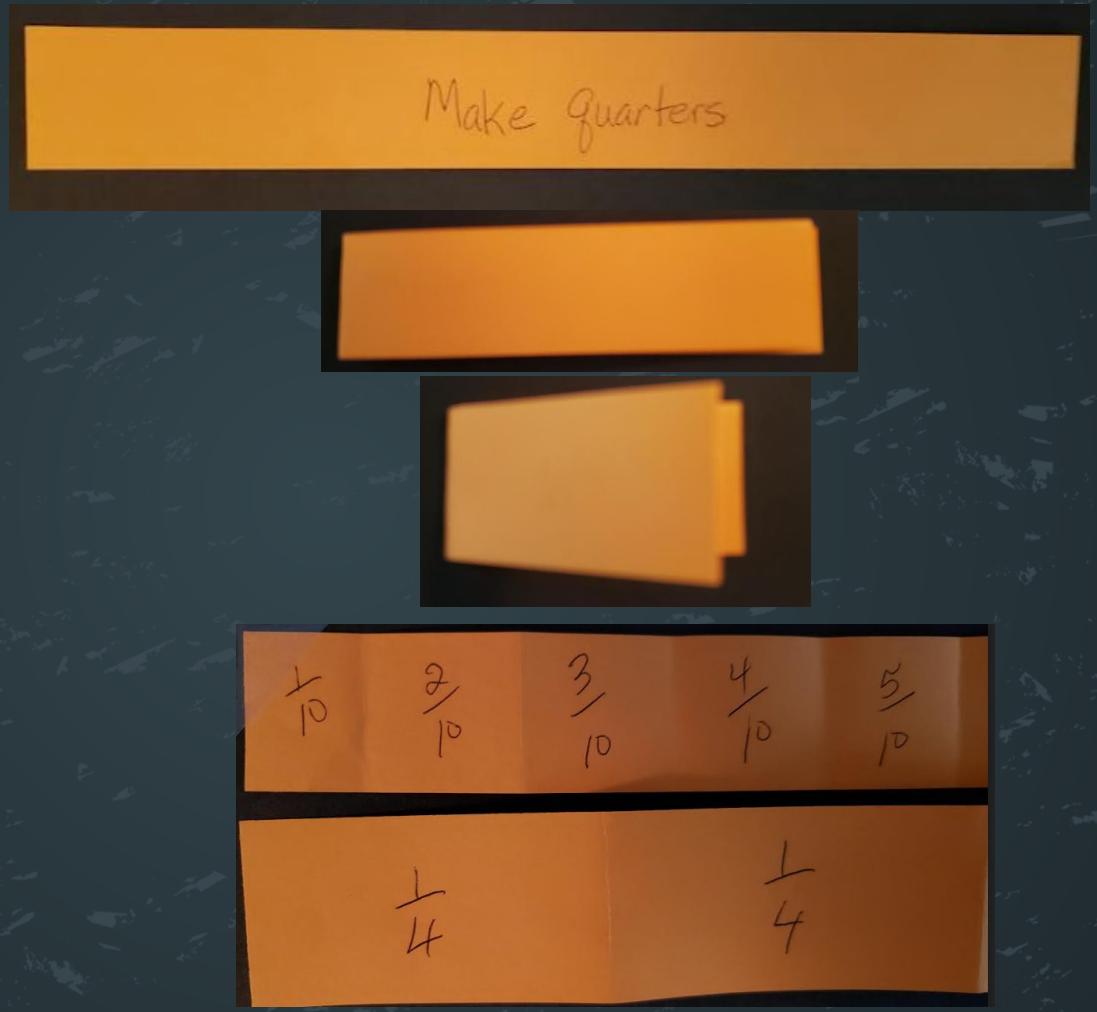
Step 2 - fold in half. How many pieces does this represent?

Step 3. Need an even value for the length so change 5 to 4.


1/10
2/10
3/10
4/10
5/10
6/10
7/10
8/10
9/10
10/10

Compare 1/10 and ¼

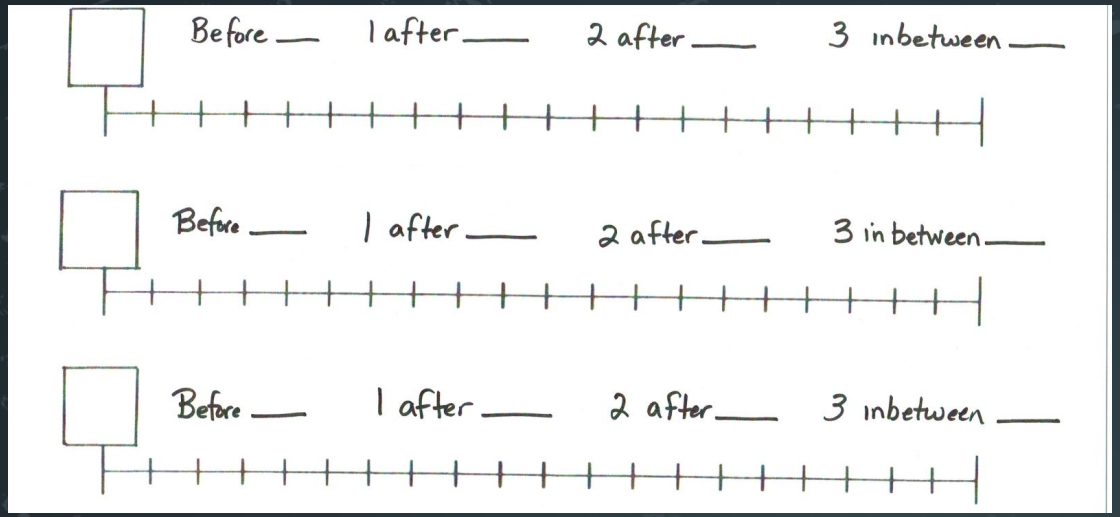
- If this is money
- Using paper strips
- Using models

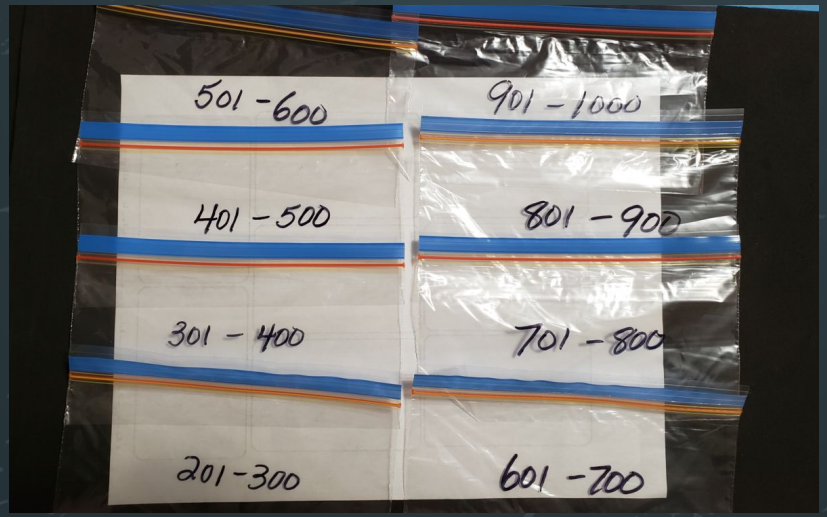


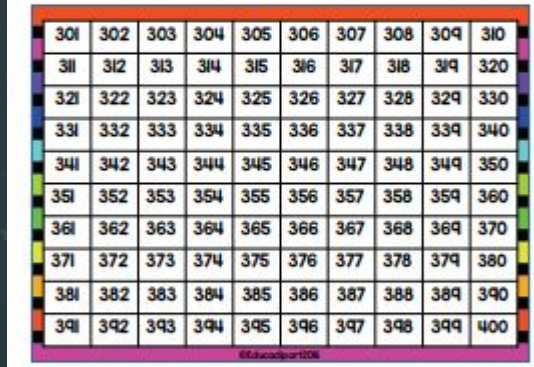
Continuing with Number (1000) - critical thinking competency

Pick a range of number you can draw from.
On one card place a zero and clip it to the end of your line.
Take two random numbers (230 and 540)

How could these questions help students create possible solutions:
When a paper that is 10 units long is folded in half, how long is each piece?
How is the piece of string you have similar to the strip of paper we used in making unit fractions?



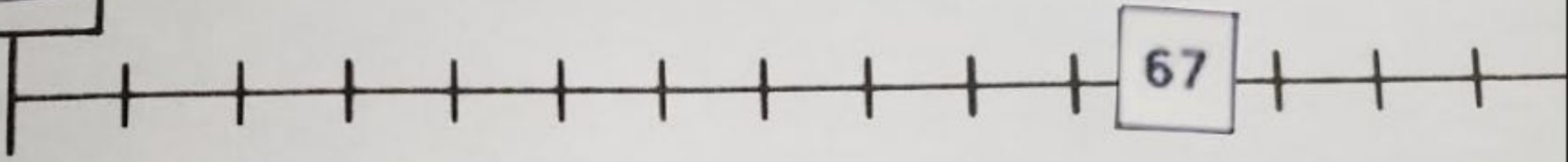


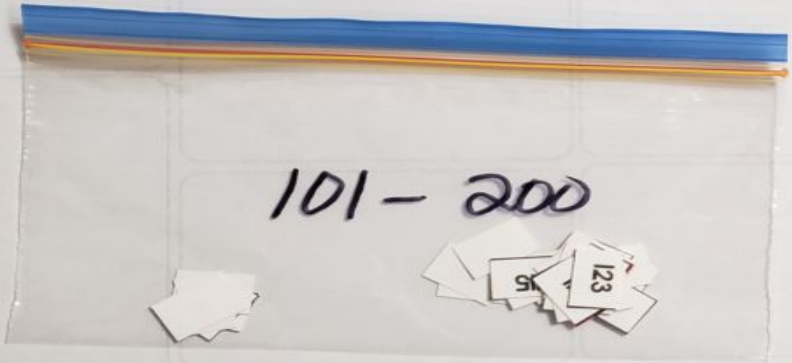


Number Cards

56

Before ___ 1 after ___ 2 after ___

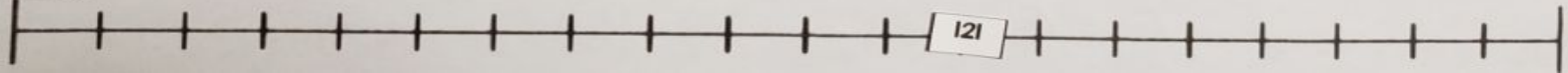


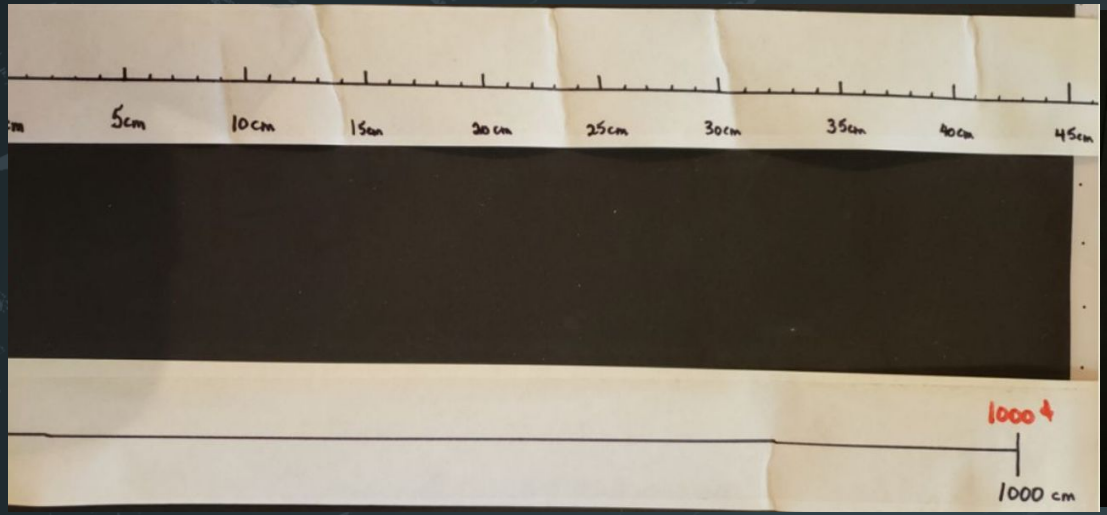


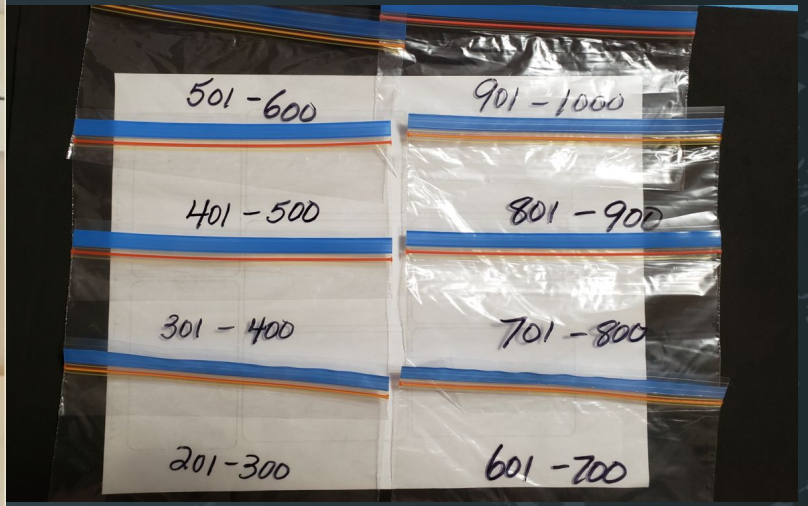
109 < 121

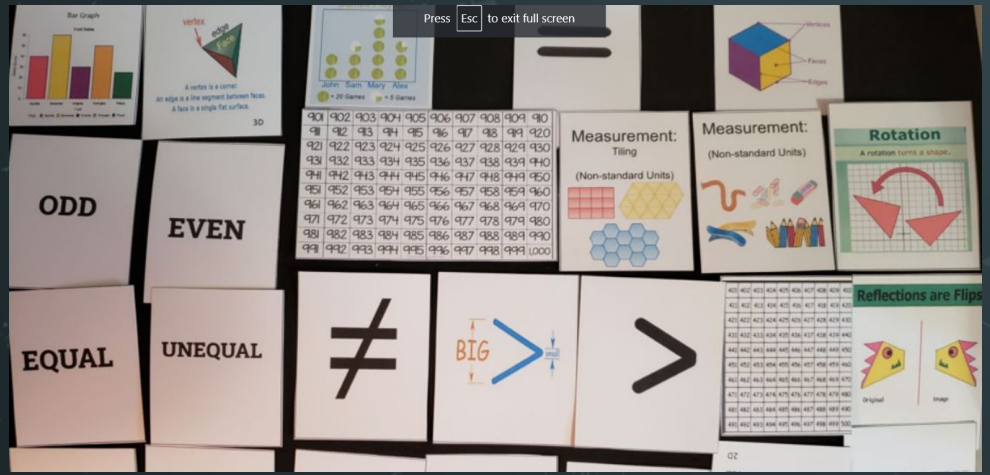
109

Before ___ 1 after ___ 2 after ___ 3 inbetween ___




5cm
10cm
15cm
20cm
25cm
30cm
35cm
40cm
45cm
1000 cm


501 - 600
901 - 1000
401 - 500
801 - 900
301 - 400
701 - 800
201 - 300
601 - 700


Press Esc to exit full screen
ODD
EVEN
EQUAL
UNEQUAL
Measurement:
Tiling
(Non-standard Units)
Measurement:
(Non-standard Units)
Rotation
A rotation turns a shape.
Reflections are Flips
BIG


0cm
Reflections are Flips

Resources

Math Toolbox - interactive manipulatives K-8

NZ Maths

Thinking 101

Ontario Math

LT Squared

Crickweb

Any questions?