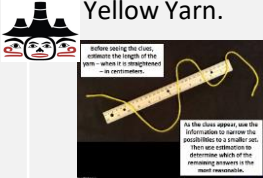


A

Estimate the length of yarn by visiting [Esti-Mysteries #10 Yellow Yarn](#).



B

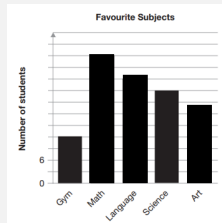
[Estimate the quotient.](#)

Practice 10 questions daily before sign-up is required.



C

[Estimate How Many?](#)



D

[Super Mario Estimation](#)

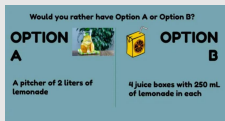


E

[Super Mario Estimation Part 2](#)






[Would you Rather?](#)

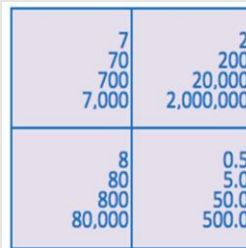


Smudged Math

What could the next three terms be?
How do you know?
Can you come up with 3 different patterns?




2, 4, , , ,

[Which One Doesn't Belong?](#)



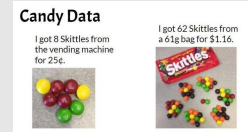
Smudged Math

The paper is smudged. What could the solution be? What different possibilities are there?

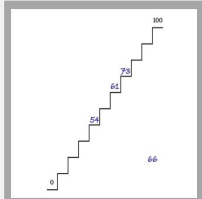
$$4 \text{  7 \text{  3 \text{  2 =$$

[Link to original question](#)

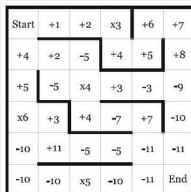
[Would you Rather?](#)



[Fill the Stairs](#)



[Math Mazes](#)

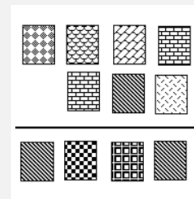


[Mix and Create Outdoor Chalk Paint](#)

[Create and Solve the Puzzle](#)



[Sticker-bility Puzzle](#)



[Target X's and O's](#)



[Broken Calculator](#)



Farmer's Fence

Imagine a farmer has 36 pieces of fencing, each 1 metre in length. How can he make the biggest possible enclosure? What about the smallest?

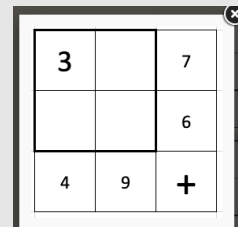
[Rye or Honey Oats?](#)



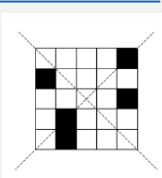
[The Shipping Container](#)



[Yohaku Puzzles](#)



[Mirror Mirror](#)



✓ [Read/Listen Online](#)
✓ [Test Yourself](#)



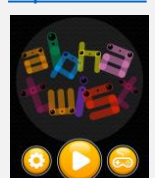
[Treasure Hunt](#)



✓ [Read/Listen Online](#)
✓ [Test Yourself](#)



[Alpha Twist](#)



Choice Board Background Information:

- ✓ Choice boards were created to provide flexibility in learning at home;
- ✓ Boards were planned for divisions: K-3, 4-6, 7-8 for open, individualized learning;
- ✓ Planned with recognition that parents may currently hold various roles at home;
- ✓ Designed to enhance the materials provided by the Ministry;
- ✓ Experiential learning focus with accessible materials at home;
- ✓ Low/No tech options;
- ✓ Accessible on mobile devices.

Choice Boards - Parents Can:

- ✓ Choose as many or as few learning opportunities as desired;
- ✓ Follow the days of the week or be flexible in using the choice boards;
- ✓ Be confident that the learning is based in curriculum;
- ✓ Engage other children in the home in common experiential learning (i.e., baking, reading, playing math games, being active together);
- ✓ Click on the links provided for further learning and sample questions to ask;
- ✓ Have fun!



Explanatory Notes: LEARN AT HOME CHOICE BOARDS FOR PARENTS AND EDUCATORS

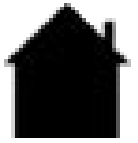


Choice Boards - Teachers Can:

- ✓ Create classroom-based choice boards for students while they are learning at home;
- ✓ Incorporate ideas from the choice boards into teaching practices, daily and weekly planning;
- ✓ Explore and incorporate new resources into classroom learning;
- ✓ Engage students and families in virtually sharing learning with one another;
- ✓ Expand on activities in order to provide individualized learning opportunities;
- ✓ Incorporate other UCDSB resources (i.e., Math Tool, VLC, links) to extend student learning.

Choice Board Activities Provide:

- ✓ Clear connections to curriculum expectations and process skills;
- ✓ Open activities with options to individualize learning;
- ✓ Accessibility (many require little to no technology);
- ✓ Math – focus on numeracy skills;
- ✓ Literacy – focus on reading, writing, oral language and media literacy;
- ✓ French learning opportunities;
- ✓ Health and Physical Well-Being;
- ✓ Opportunities to foster connections within the household;
- ✓ Focus on conversation and thinking.



How much yarn?

Weaving a very undervalued artform. It takes great knowledge in such things as math, science and history to create at times.

Please watch the following videos for more understanding.



(Be sure to zoom in to these images to see the detail!)

[Lily Hope Chilkat Weaver](#)

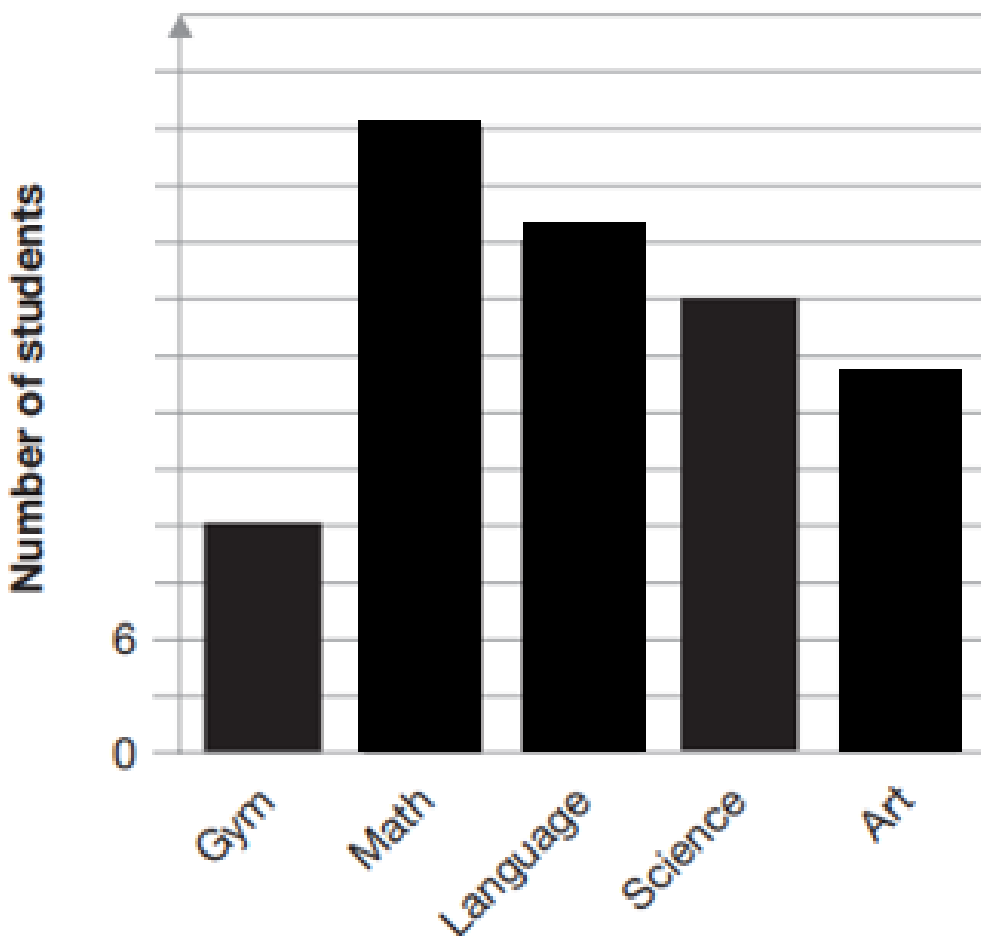
Still not sure where the math is?

Watch this video on another Northwest Coast weaving style which is a bit more straight forward than Chilkat weaving.

[How to Create a Design in a Ravenstail Robe](#)



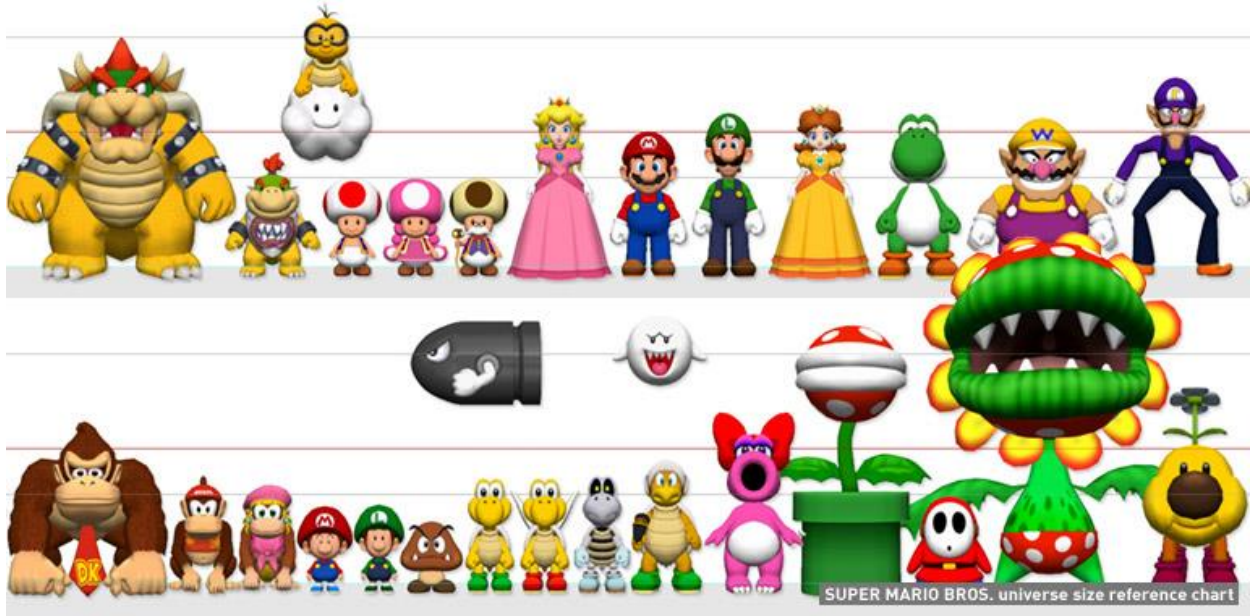
Favourite Subjects



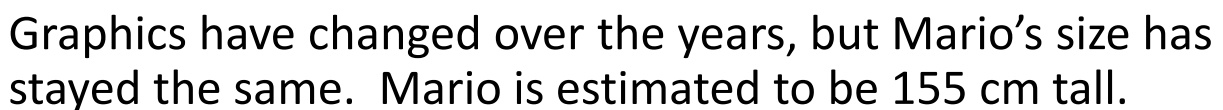
Estimate How Many

Estimate the number of students who picked each subject as their favourite.

How do you know?



http://brianaspinall.com/wp-content/uploads/2015/02/Size_chart.jpg



Upper Canada District School Board

Super Mario Estimation Part 2

<http://brianaspinall.com/3d-measurement-just-how-big-is-a-super-mario-pipe/>

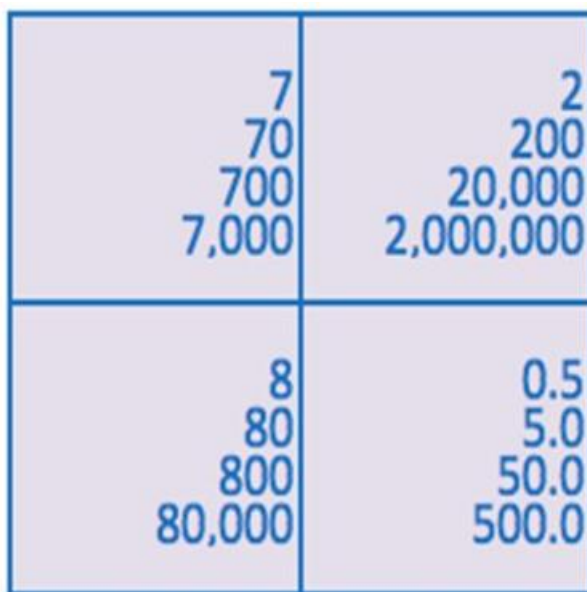
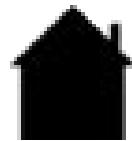


If Mario is 155 cm tall. Estimate the dimensions of the pipe.



Estimate the height of the flag pole. What values would be too low, to high and just right? How do you know?

Which One Doesn't Belong?



NUMBER 43

from Caroline Scott

Step 1: Examine the four growing patterns.

Step 2: Identify the one you believe doesn't belong.

Explain your reasoning.

Step 3: Imagine another student has chosen a different growing pattern as the one that doesn't belong. What might be their reasoning?

Challenge: Provide an argument for each of the four growing patterns not belonging with the others.

<https://wodb.ca/numbers.html>

Would You Rather?



Would you rather have Option A or Option B?

**OPTION
A**



**A pitcher of 2 liters of
lemonade**



**OPTION
B**

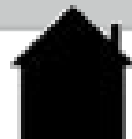
**4 juice boxes with 250 mL
of lemonade in each**

Explain your reasoning using mathematics.

<https://www.wouldyourathermath.com/category/3to5/>

Option A	Or	Option B
	Break it down	
Conclusion: I would rather		
Because ...		

Would You Rather?



Candy Data

Option A

I got 8 Skittles from the vending machine for 25¢.



Option B

I got 62 Skittles from a 61g bag for \$1.16.

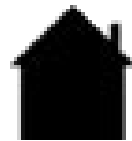


Explain your reasoning using mathematics.

<https://www.wouldyourathermath.com/skittles/>

Option A	Or	Option B
	Break it down	
Conclusion: I would rather		
Because ...		

Fill the Stairs



Math for Love

<https://mathforlove.com/lesson/fill-the-stairs/>

Required Materials:

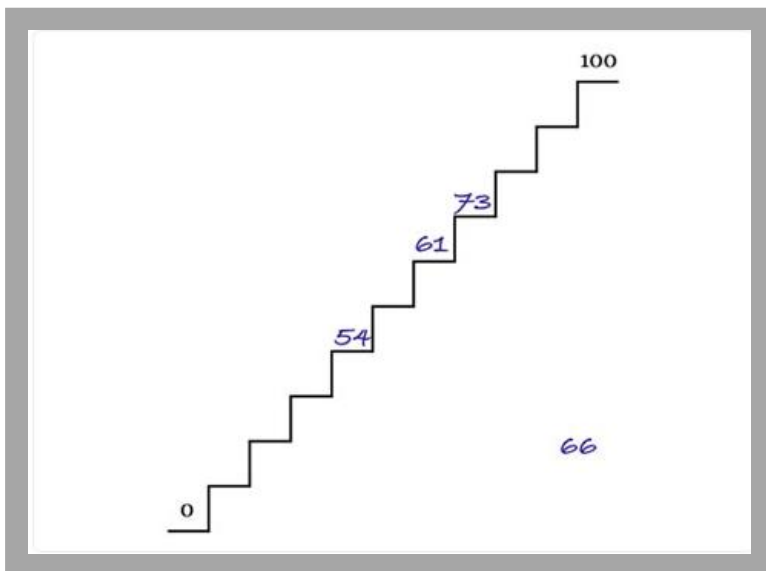
A deck of cards with the face cards removed.

Alternatively, you can use two ten-sided dice if you have them.

Instructions:

Draw a stair case with 11 steps. Place zero on the bottom step and 100 on the top step.

Place the shuffled cards in the middle. Flip over two cards, the first is the tens digit, the second is the ones. If you flip a ten, it counts as a zero.



Everyone then places the number that was flipped where they like on the stair case. The only rule is that the numbers higher up on the stairs must be greater than all the numbers below them. If a player can't use a number, it gets written under the stairs as a "discard". The winner is the first person to fill up their stairs.

Questions to ask:

Where are you going to put that number? Why there?

What numbers are you hoping for on the next flip?

How do you know that number is bigger/smaller than that one?

Change it up:

Work cooperatively to fill the stairs with as few wasted moves as possible.

Let the person flipping the cards decide which is the tens digit and which is the ones digit.

Place from 0 to 1000 and flip three cards instead of 2.

Place with a set of 5 stairs, from 0 to 10 and flip only one card (remove the tens from the deck).



Math Mazes

[Math Eds on Twitter](#)

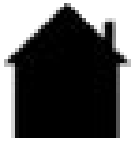
Start at the start box with 0, and without passing through the same cell twice, what's the largest total you can make?
Is there a strategy you can use?

Start	+5	+5	+5	+5	+5
+6	+4	+4	+5	+5	+5
+6	+4	+4	+4	+4	+4
+6	+7	+7	+7	+7	+4
+6	+8	+8	+8	+8	+4
+6	+6	+6	+6	+6	End

Start	+11	-10	+9	-6	+5
+20	-18	+4	-8	+7	-4
-16	+4	-2	+4	-3	+4
-2	+3	+4	+7	+7	+4
+6	+11	-5	-5	+8	+4
-3	+6	+6	-11	+6	End

Start	+1	+2	x3	+6	+7
+4	+2	-5	+4	+5	+8
+5	-5	x4	+3	-3	-9
x6	+3	+4	-7	+7	-10
-10	+11	-5	-5	-11	-11
-10	-10	x5	-10	-11	End

Create Outdoor Chalk Paint



Recipe 1:

Ingredients:

crushed chalk and water

Instructions:

1. Crush chalk
2. Add in water by the tablespoon full until you are happy with the consistency

Note: if it gets too thin, let it sit a while and it will thicken up. If it gets too thick, think out with a little more water.

<http://www.learnplayimagine.com/2014/05/two-ingredient-sidewalk-chalk-paint.html?m=1>

Recipe 2:

Ingredients:

Flour

Water

Food colouring

Instructions:

1. Measure some flour into a container
2. Add several drops of food colouring
3. Add water that is equal to half the amount of flour.
4. Mix until there are no lumps

Note: if it gets too thin, let it sit a while and it will thicken up. If it gets too thick, think out with a little more water.

<http://earlylearning.momtrusted.com/2013/04/flour-sidewalk-paint/>

Recipe 3:

Ingredients:

Cornstarch

Water

Food colouring

Instructions:

1. Measure some cornstarch into a container
2. Add an equal amount of water
3. Mix until there are no lumps
4. Split the mixture up into other small containers and add food colouring.
5. If the mixture is too thick to paint, add a little more water.

<https://ladyandtheblog.com/how-to-make-diy-sidewalk-chalk-paint/>



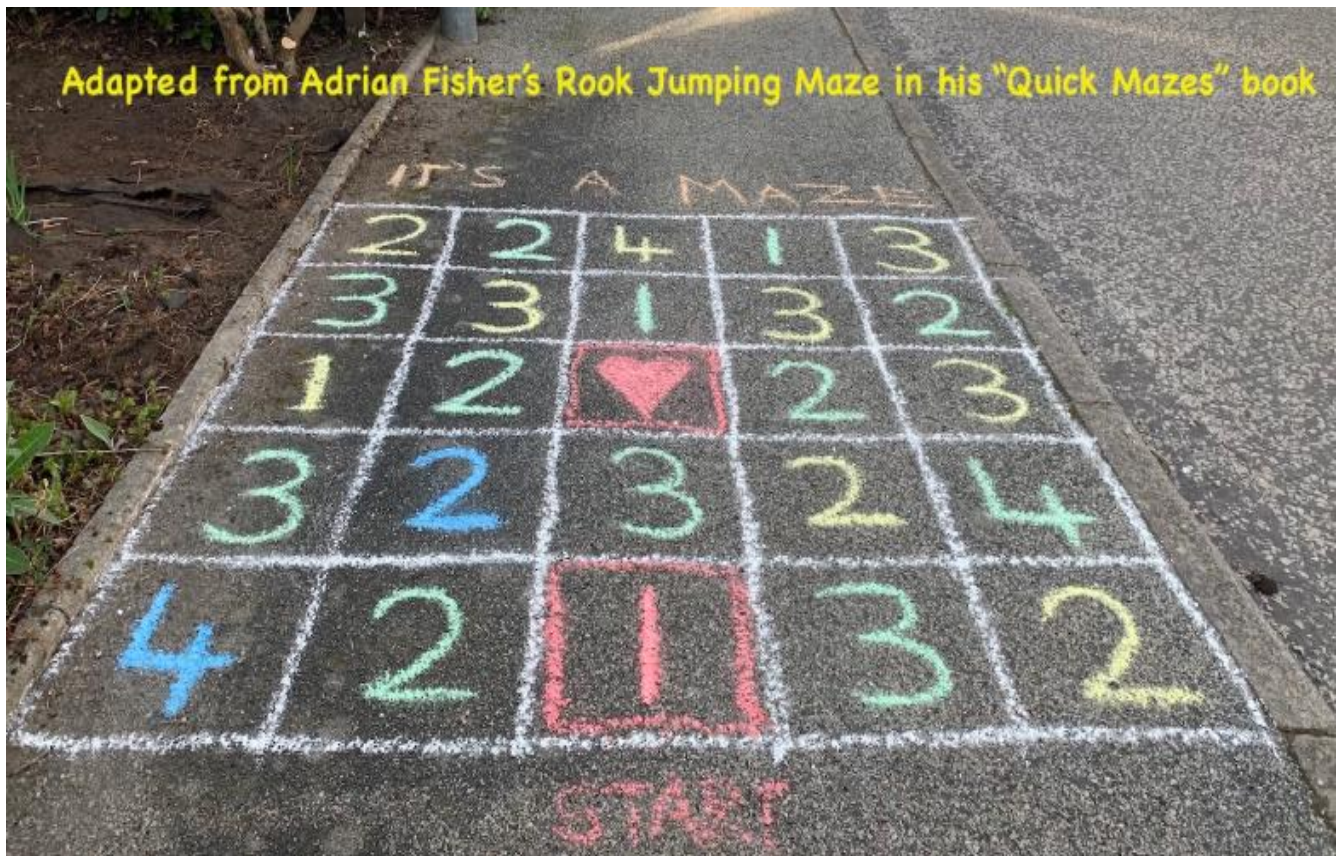
Math Puzzle Outside



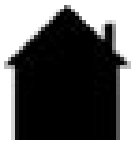
Instructions:

1. Draw / paint the 5 x 5 grid on the driveway or sidewalk.
2. Start on the 1 in the bottom center square.
3. Then, jump 1 space in any directions (front, back, left, right) but NOT diagonal.
4. You can jump in any direction the number of squares indicated by the square you are standing on.
5. Goal: Reach the heart in the center.


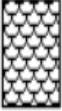


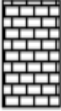
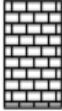
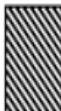

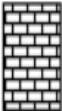
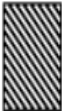
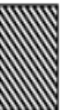


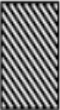
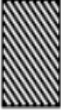
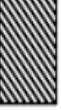
<https://twitter.com/CreativeSTAR/status/1250333479369228291?s=20>



Sticker-bility Puzzle



The addition sum below is a puzzle I've been trying to solve. The idea is that each type of sticker stands for a different number, but that this number is the same wherever that sticker occurs.

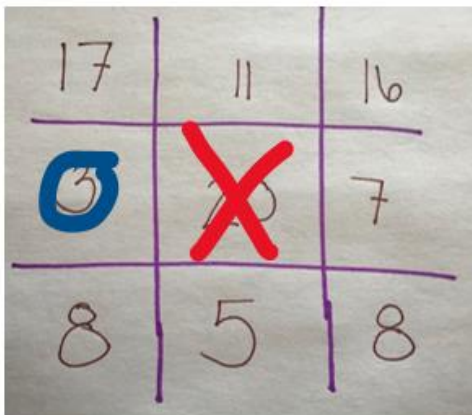
				8	3	5	
						2	
<hr/>				<hr/>			
					1	4	

So far I've got it to the picture shown in the second diagram. Can you finish it off for me?

<https://www.mathsisfun.com/puzzles/sticker-bility.html>

Target X's and O's

<https://www.lovemaths.me/games>



Watch the game
being played [here](#)

X will make 17 using $10 + 3 + 4$ and cross off the 17. They will then draw 3 more cards to replace their used cards.

Required Materials:

- Deck of cards with the face cards removed
- Paper and Pencils

Instructions:

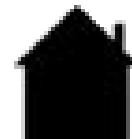
- Draw a tic – tac – toe board
- Generate numbers for the board. You may use a 20 sided die, or alternatively, put the numbers 1 – 20 on pieces of paper and draw them out of a hat or a bowl. Write the numbers on the spaces of the board.
- Each player gets dealt 6 cards from the pile.
- The first person that make an equation that equals a number on the board gets to go first. They then put their mark on that number on the board. They discard the used cards, and replace them from the draw pile. You may use any operation including addition, subtraction, multiplication, division.
- The next person comes up with an equation to equal one of the other numbers on the board. They discard the used card, and replace them from the draw pile.
- The winner is the person who gets three in a row.

Change it up:

- Add in jacks as zeros or Use a higher range of numbers ie. 1 - 50

Questions to ask:

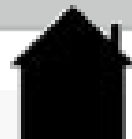
- What number are you trying to make now? Why?
- Explain to me how you got ... ?
- Can you make ... using multiplication / subtraction etc. ? (offer suggestions when they need help but do not tell them how to get the answer.)
- What would you do differently the next time you played?



Broken Calculator

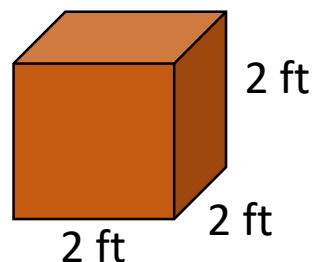
<https://mathforlove.com/lesson/broken-calculators/>

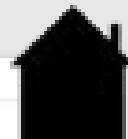
Round	Solutions
<p>Round 1:</p> <p>The calculator has a broken 1 key and a broken 3 key. Make the following numbers:</p> <p>A. 13</p> <p>B. 31</p> <p>C. 33</p>	
<p>Round 2</p> <p>The calculator has a broken 2 key and a broken 5 key. Make the following numbers:</p> <p>A. 22</p> <p>B. 25</p> <p>C. 52</p>	
<p>Round 3</p> <p>The calculator has a broken 1 key, and broken 7 key, and a broken + key. Make the following numbers:</p> <p>A. 17</p> <p>B. 41</p> <p>C. 71</p>	
<p>The calculator has broken 1, 2, 3, 4, 5, and 6 keys. Make the following numbers:</p> <p>A. 11</p> <p>B. 12</p> <p>C. 30</p>	



Shipping Container

- The actual size of a 20 foot shipping container is 8 feet wide, 8.5 feet high and 20 feet long.
- If the cubes you ship at 2ft by 2ft by 2ft. How many cubes can you ship in a 20 foot container?
- How do you know?
- What would change your answer?





Problem of the Week

Problem B

Will That be Rye or Honey Oats?

Jagheet drives from his house to his cottage, 75 km away, maintaining an average speed of 60 km/h.

- How long, in minutes, does it take him to drive to his cottage?
- If he left his house at 11:37 a.m., at what time could he expect to arrive at his cottage?
- Realizing that he forgot to get bread, he stops at the grocery store for 12 minutes. Including this time, what is his new average speed in km/h?
(Round your answer to the nearest tenth.)



<https://www.cemc.uwaterloo.ca/resources/potw/2019-20/English/POTWB-19-ME-02-P.pdf>

A solution using a Ratio Table.

a)

KM	0	60	30	15	75
Time	0	60	30	15	75

It would take 75 min.

b)

11:37 + 75 min
= 11:37 + 1:15
= 12:52

11:37 → 12:37 (+1 hr) → 12:47 (+10 min) → 12:52 (+5 min)

c)

KM	75	25	50
Time	87	29	58

80 this speed is a little bit faster than 50 km/hour

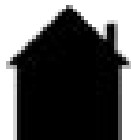
Pretty close to 1 hour.

alternatively: if you have a calculator

$$75 \div 87 = 0.862 \text{ km/min}$$

$$0.862 \times 60 = 51.7 \text{ km/hour}$$

Yohaku Puzzles



<https://www.yohaku.ca/a-new-type-of-number-puzzle.html>

Instructions:

To solve the puzzle, you must fill in the empty spaces so that the sum, or the product, shown in each row and column is true.

Looking carefully at the sum or product in each row or column will give you some clues as to how these values can be decomposed, and combined with information from other rows and columns.

3		7
		6
4	9	+

2		8
		15
10	12	X

		61
		39
74	26	+

	7	28
		12
24	14	X

			15
			5
			24
17	13	14	+

			24
			42
			5
4	18	70	X

Grades 4 – 6: Curriculum Continuum

Note: highlighted expectations are addressed in this menu

	Grade 4	Grade 5	Grade 6
Process Skills	<ul style="list-style-type: none">❑ Problem Solving❑ Reasoning and Proving❑ Reflecting	<ul style="list-style-type: none">❑ Selecting Tools and Computational Strategies❑ Connecting	<ul style="list-style-type: none">❑ Representing❑ Communicating
Number Sense and Numeration	<ul style="list-style-type: none">❑ read, represent, compare, and order whole numbers to 10 000, decimal numbers to tenths, and simple fractions, and represent money amounts to \$100❑ demonstrate an understanding of magnitude by counting forward and backwards by 0.1 and by fractional amounts❑ solve problems involving the addition, subtraction, multiplication, and division of single- and multi-digit whole numbers, and involving the addition and subtraction of decimal numbers to tenths and money amounts, using a variety of strategies❑ demonstrate an understanding of proportional reasoning by investigating whole-number unit rates	<ul style="list-style-type: none">❑ read, represent, compare, and order whole numbers to 100 000, decimal numbers to hundredths, proper and improper fractions, and mixed numbers❑ demonstrate an understanding of magnitude by counting forward and backwards by 0.01❑ solve problems involving the multiplication and division of multi-digit whole numbers, and involving the addition and subtraction of decimal numbers to hundredths, using a variety of strategies;❑ demonstrate an understanding of proportional reasoning by investigating whole-number rates.	<ul style="list-style-type: none">❑ read, represent, compare, and order whole numbers to 1 000 000, decimal numbers to thousandths, proper and improper fractions, and mixed numbers❑ solve problems involving the multiplication and division of whole numbers, and the addition and subtraction of decimal numbers to thousandths, using a variety of strategies❑ demonstrate an understanding of relationships involving percent, ratio, and unit rate
Patterning and Algebra	<ul style="list-style-type: none">❑ describe, extend, and create a variety of numeric and geometric patterns, make predictions related to the patterns, and investigate repeating patterns involving reflections;❑ demonstrate an understanding of equality between pairs of expressions, using addition, subtraction, and multiplication	<ul style="list-style-type: none">❑ determine, through investigation using a table of values, relationships in growing and shrinking patterns, and investigate repeating patterns involving translations;❑ demonstrate, through investigation, an understanding of the use of variables in equations.	<ul style="list-style-type: none">❑ describe and represent relationships in growing and shrinking patterns (where the terms are whole numbers), and investigate repeating patterns involving rotations;❑ use variables in simple algebraic expressions and equations to describe relationships.
Measurement	<ul style="list-style-type: none">❑ estimate, measure, and record length, perimeter, area, mass, capacity, volume, elapsed time, using a variety of strategies❑ determine the relationships among units and measurable attributes, including the area and perimeter of rectangles.	<ul style="list-style-type: none">❑ estimate, measure and represent time intervals to the nearest second estimate and determine elapsed time, with and without using a time line, given the durations of events expressed in minutes, hours, days, weeks, months, or years❑ measure and record temperatures to determine and represent temperature changes over time❑ estimate and measure the perimeter and area of regular and irregular polygons, using a variety of tools and strategies.	<ul style="list-style-type: none">❑ estimate, measure, and record quantities, using the metric measurement system;❑ determine the relationships among units and measurable attributes, including the area of a parallelogram, the area of a triangle, and the volume of a triangular prism.
Geometry and Spatial Sense	<ul style="list-style-type: none">❑ identify quadrilaterals and three-dimensional figures and classify them by their geometric properties, and compare various angles to benchmarks;❑ construct three-dimensional figures, using two-dimensional shapes;❑ identify and describe the location of an object, using a grid map, and reflect two-dimensional shapes	<ul style="list-style-type: none">❑ identify and classify two-dimensional shapes by side and angle properties, and compare and sort three-dimensional figures;❑ identify and construct nets of prisms and pyramids;❑ identify and describe the location of an object, using the cardinal directions, and translate two-dimensional shapes	<ul style="list-style-type: none">❑ classify and construct polygons and angles;❑ sketch three-dimensional figures, and construct three-dimensional figures from drawings;❑ describe location in the first quadrant of a coordinate system, and rotate two-dimensional shapes
Data Management and Probability	<ul style="list-style-type: none">❑ collect and organize discrete primary data and display the data using charts and graphs, including stem-and-leaf plots and double bar graphs❑ read, describe, and interpret primary data and secondary data presented in charts and graphs, including stem-and-leaf plots and double bar graphs❑ predict the results of a simple probability experiment, then conduct the experiment and compare the prediction to the results	<ul style="list-style-type: none">❑ collect and organize discrete or continuous primary data and secondary data and display the data using charts and graphs, including broken-line graphs❑ read, describe, and interpret primary data and secondary data presented in charts and graphs, including broken-line graphs❑ represent as a fraction the probability that a specific outcome will occur in a simple probability experiment, using systematic lists and area models.	<ul style="list-style-type: none">❑ collect and organize discrete or continuous primary data and secondary data and display the data using charts and graphs, including continuous line graphs;❑ read, describe, and interpret data, and explain relationships between sets of data;❑ determine the theoretical probability of an outcome in a probability experiment and use it to predict the frequency of the outcome.