

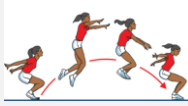



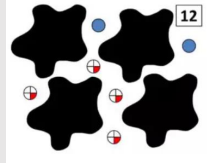

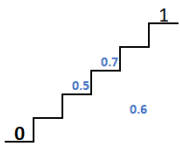


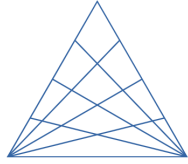
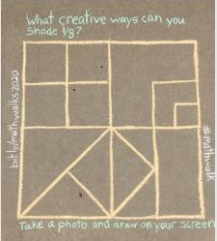

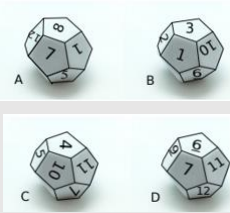
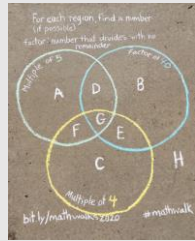

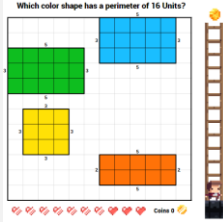




	A	B	C	D	E												
Estimation	<p><a href="#">Estimate the total number of golf balls in the pyramid.</a></p> 	<p> <b>Q</b> How long would it take you to do at least two of these things?</p> <ul style="list-style-type: none"><li>eat 1000 calories' worth of pizza</li><li>go to school 1000 days</li><li>read 1000 books</li><li>say 1000 words</li></ul> <p>Rubicon © 2020 Rubicon Publishing Inc.</p>	<p>Estimate how far you can jump from a standing position. Investigate! Find the mean average (in cm) of three jumps.</p> 	<p><a href="#">Estimate the number of flowers that can be made?</a></p> 	<p><a href="#">Predict the number of "heads," and "tails," when tossing a coin thirty times!</a></p> 												
Talking about Math	<p><a href="#">Same but Different</a></p> <p><b>\$1.65   165¢</b></p> <p><b>67¢   \$0.67</b></p>	<p><a href="#">How Many Strawberries?</a></p> 	<p><a href="#">Which One Doesn't Belong?</a></p> <table><tr><td><math>\frac{1}{20}</math></td><td><math>\frac{20}{25}</math></td></tr><tr><td><math>\frac{2}{3}</math></td><td><math>\frac{5}{4}</math></td></tr></table>	$\frac{1}{20}$	$\frac{20}{25}$	$\frac{2}{3}$	$\frac{5}{4}$	<p><a href="#">How Many?</a></p> 	<p><a href="#">Same but Different</a></p> 								
$\frac{1}{20}$	$\frac{20}{25}$																
$\frac{2}{3}$	$\frac{5}{4}$																
Activities / Games	<p><a href="#">Decimal Fill the Stairs</a></p> 	<p><a href="#">I Spy Challenge</a></p> 	<p><b>Bake</b></p> <p>A milk pudding recipe calls for 750mL of milk. If the recipe serves 6, how much milk would be in each serving? If you have 3L of milk, how many people could you serve?</p>	<p><a href="#">The Four 4's</a></p> 	<p><a href="#">Triangle / Quadrilateral Puzzle</a></p> 												
Problems	<p><a href="#">One Eighth?</a></p> 	<p><a href="#">Lost Data</a></p> 	<p><a href="#">Would you Rather?</a></p> <p><b>Would you Rather...</b></p> <p>Have Cheez-It's® to cover a rectangle with.</p> <p>A length of 9 and a perimeter of 22</p> <p><b>CHEEZ-IT</b></p> <p>A length of 5 and a perimeter of 20</p>	<p><a href="#">Deese Dice are D12's</a></p> 	<p><a href="#">What Number goes Where?</a></p> 												
Technology	<p>✓ <a href="#">Read/Listen Online</a></p> <p>✓ <a href="#">Test Yourself</a></p> 	<p><a href="#">Number Line Investigations</a></p> <p>Drag the points to the correct places on the number line.</p> <table><tr><td>A</td><td>B</td><td>C</td><td>D</td></tr><tr><td>18.39</td><td>13.371</td><td><math>\frac{59}{3}</math></td><td><math>2\frac{4}{11}</math></td></tr><tr><td>A</td><td>B</td><td>C</td><td>D</td></tr></table>	A	B	C	D	18.39	13.371	$\frac{59}{3}$	$2\frac{4}{11}$	A	B	C	D	<p><a href="#">Perimeter Climber</a></p> <p>Which color shape has a perimeter of 16 Units?</p> 	<p><a href="#">Area Climber</a></p> <p>Which color shape has an area of 12 Square Units?</p> 	<p><a href="#">Parking Game</a></p> 
A	B	C	D														
18.39	13.371	$\frac{59}{3}$	$2\frac{4}{11}$														
A	B	C	D														



## 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.

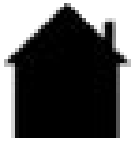
# Estimate the Total Number of Golf Balls



1. How many golf balls do you believe there are altogether? What is your best estimate?
2. What estimate would be too high? Too low?
3. What do you notice about the arrangement of golf balls? What 3-D solid does it mimic?
4. How can you determine the actual number of golf balls? Do you notice a pattern in each layer?

<http://ntimages.weebly.com/photos.html>

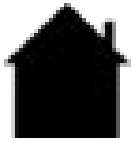
# Estimate the Total Number of Flowers That Can Be Created



1. How many complete flowers can be created?  
What is your best estimate?
2. What estimate would be too high? Too low?
3. How does the image of one complete flower help you with your estimate?
4. If there are 105 wooden diamonds altogether, calculate the total number of flowers that can be created.

<http://ntimages.weebly.com/suites--strings.html>

## Probability Experiment



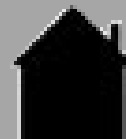
Predict how many “heads,” and “tails,” you would expect if you toss a coin thirty times. Explain your reasoning to a family member. Investigate and record your data in the table below:

<u>Predicted Results:</u>		<u>Actual Results:</u>	
# of Heads	# of Tails	# of Heads	# of Tails

How did your predicted results compare with the actual results? If you repeat the experiment, would you expect the same results? Why or why not?

Repeat the experiment. What did you notice? Are the results similar or different? Why might this happen?

Now, create your own coin toss experiment. Predict the number of times you would land on “heads,” and “tails.” Investigate. Are you surprised by your results? Why or why not?



# Same But Different

<https://www.samebutdifferentmath.com/measurement>

How are the two amounts the same?

How are they different?

Task 1

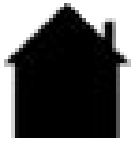
\$1.65      165¢

Task 2

67¢      \$0.67



# How many Strawberries?



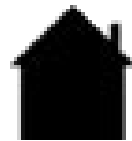
From / De : Chrissy Newell (@[MrsNewell22](https://twitter.com/MrsNewell22))  
<http://ntimages.weebly.com/suites--strings.html>

How many Strawberries are there?  
How do you know?  
Is there another way you could  
find the solution?



How many Strawberries are there?  
How do you see them?  
Is there another way you could  
find the solution?

# Which One Doesn't Belong?



$\frac{1}{20}$	$\frac{20}{25}$
$\frac{2}{3}$	$\frac{5}{4}$

**NUMBER 10**

from Hélène Matte

**Step 1: Examine the four fractions.**

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

**Explain your reasoning.**

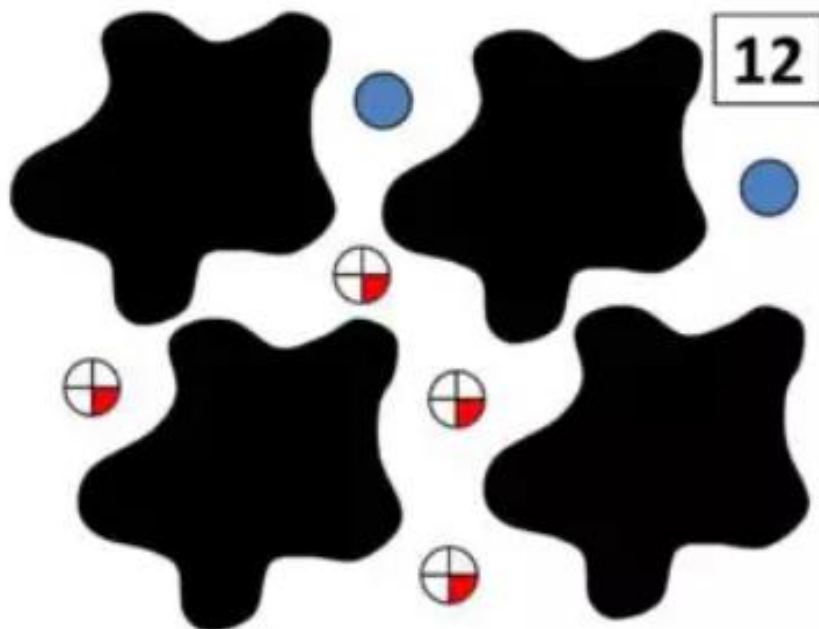
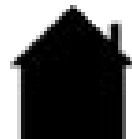
**Step 3: Imagine another student has chosen a different fraction as the one that doesn't belong.**

**What might be their reasoning?**

**Challenge: Provide an argument for each of the four fractions not belonging with the others.**

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





<https://stevevyborney.com/>

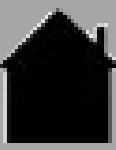
# Splat

## Some Questions to Ask

- What is the value of the dots, outside the splat? How do you know?
- How many dots are hiding under the splat?
- How do you know?
- How might another child figure it out?
- What number sentence could represent this splat?

## Note:

In a splat, the number in the box tells how many dots there are in total. There are an equal number of dots under each splat of the same colour.

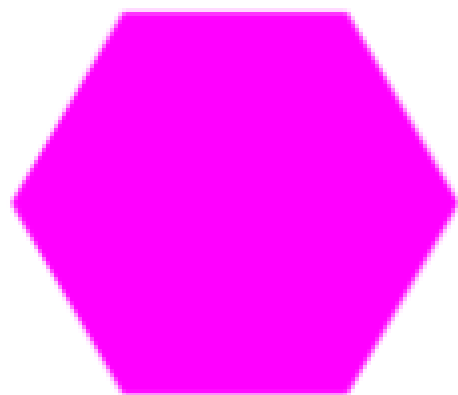
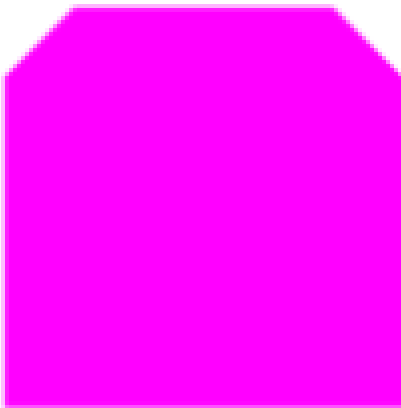


# Same But Different

<https://www.samebutdifferentmath.com/geometry>

How are the two images below the same?

How are they different?



## Have you considered:

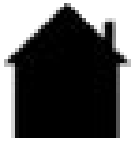
- ❖ Number of sides?
- ❖ Lengths of sides?
- ❖ Types of angles?
- ❖ Name of polygon?
- ❖ Is it a regular or irregular polygon?

# I Spy Geometry and Measurement Activity



It's time to be a **MATH DETECTIVE** at home. Write your name in the **START** space and then begin exploring each clue within the grid. Complete and colour each space along the path as you go! The challenge will be to shade in every tile on the grid before reaching the **END** space. If possible, capture a photo of each item you locate and share your findings with your family. Happy sleuthing! 😊

<p><b><u>START HERE</u></b></p> <p>My name is:</p> <p>_____</p>	<p>I have 2 lines of symmetry. I am _____.</p>	<p>I can find a digital time which includes the digit "4". I am _____.</p>	<p>I have a right angle and measure 90 degrees. I am _____.</p>	<p>I can find two objects that have the same area. They are: _____ and _____.</p>
<p>I have three equal side lengths and so I am an equilateral triangle. I am _____.</p>	<p>I can find two objects that have the same perimeter. They are: _____ and _____.</p>	<p>The capacity of this item is less than 500 millilitres. I am _____.</p>	<p>This object is an octagon. It is _____.</p>	<p>This item has two sets of parallel sides. It is _____.</p>
<p>This item has a mass of less than 300 grams. I am _____.</p>	<p>This object is a hexagon. It is _____.</p>	<p>I have a mass of exactly one kilogram. I am _____.</p>	<p>This solid can be classified as a rectangular prism. It is _____.</p>	<p>I have an obtuse angle and measure more than 90 degrees. I am _____.</p>
<p>This item measures between 30 centimetres and 1 metre. It is _____.</p>	<p>I have an acute angle and measure less than 90 degrees. I am _____.</p>	<p>If you fold this item it will create two congruent triangles. I am _____.</p>	<p>I have the capacity of exactly one litre. I am _____.</p>	<p>This cylinder has a height of more than 100 millimetres. I am a _____.</p>
<p>The capacity of this item measures between 500 millilitres and 1 litre. I am _____.</p>	<p>This item has the same length and width. It is _____.</p>	<p>This solid can be identified as a cube. It is _____.</p>	<p>It takes between two and three minutes to walk around the perimeter of this space. It is _____.</p>	<p><b><u>END HERE</u></b></p> <p>Congratulations on your detective work!!!</p>



# The Four 4's

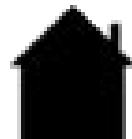
<https://www.youcubed.org/tasks/the-four-4s/>

## Task Instructions

Can you find every number between 1 and 20 using only four 4's and any operation?

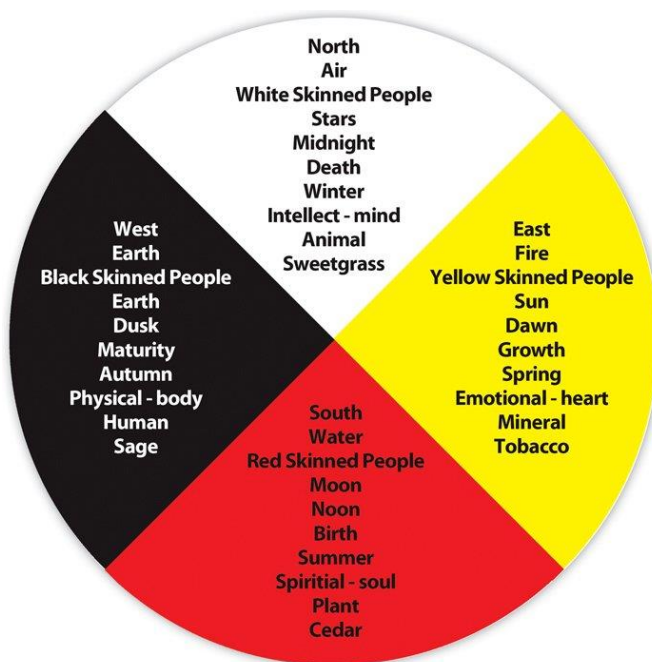
We have put a few equations in the table to get you started.

Number	Equation	Number	Equation
1		11	
2	$(4 \div 4) + (4 \div 4) = 2$	12	
3		13	
4		14	
5	$\sqrt{4} + \sqrt{4} + \frac{4}{4} = 5$	15	
6		16	
7		17	
8		18	
9		19	
10		20	



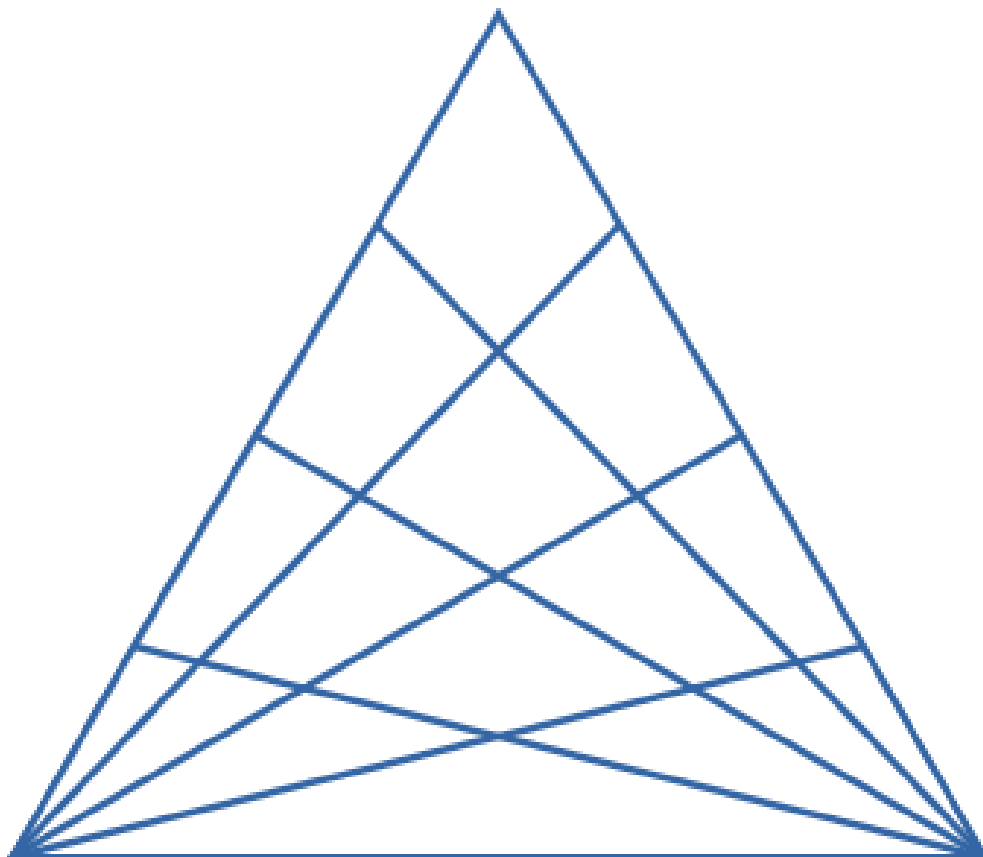
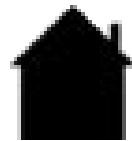
The number four is quite prominent within Indigenous Cultures. Most notably in the teachings of the “Medicine Wheel”. It is said that there are more Medicine Wheels than there are stars in the sky.

Watch the attached video to enjoy an entertaining way these and other beliefs can be taught.



### [Living a Circular Life](#)

# Triangle / Quadrilateral Puzzle



Study the figure carefully.

How many triangles are there altogether?

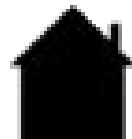
How many quadrilaterals are there altogether?

<https://www.mathsisfun.com/puzzles/count-the-shapes-solution.html>

**Solution**

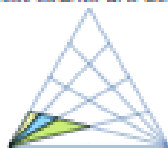


# Triangle / Quadrilateral Puzzle – Answer Key



Here is **our** count of triangles, did we get it right?

(Most counts are doubled due to symmetry.)



6



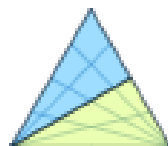
8



8



8



4



2



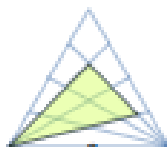
2



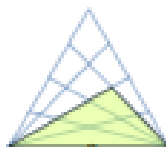
2



2



2



2



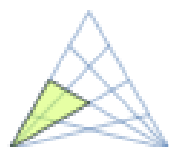
2



1



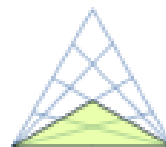
2



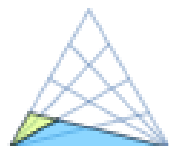
2



2



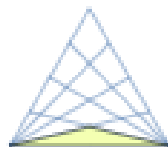
1



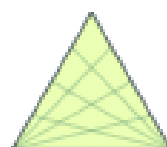
4



2



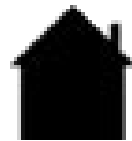
1



1

And there are also 36 Quadrilaterals.

# Decimal Fill the Stairs



Adapted from: [Math for Love](https://mathforlove.com/lesson/fill-the-stairs/)

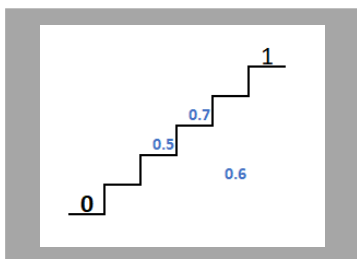
<https://mathforlove.com/lesson/fill-the-stairs/>

## Required Materials:

A deck of cards with the face cards removed.

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

## Instructions:



### Playing with Tenths:

Draw a stair case with 6 steps. Place zero on the bottom step and 1 on the top step.

Place the shuffled cards in the middle.

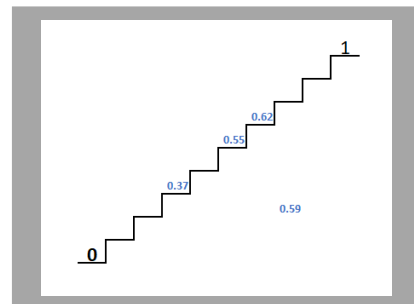
Flip over one card. This card is how many tenths. Encourage your child to say the number, i.e. four tenths, or five tenths, etc.

### Playing with Hundredths:

Draw a stair case with 11 steps. Place zero on the bottom step and 1 on the top step.

Place the shuffled cards in the middle.

Flip over two cards, the first is the tenths digit, the second is the hundredths. 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 card is each digit.

Play to thousandths by flipping 3 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).



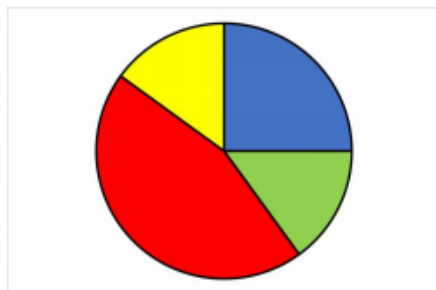
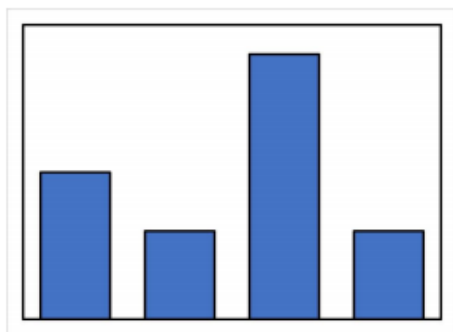
## Problem of the Week

### Problem A

### Lost Data

### One Solution

Tanner randomly surveyed 40 students in his school about their ages. The ages given were six, seven, eight, and nine. After gathering the answers, he drew a bar chart and a pie chart to show the results. Unfortunately, before he labelled each chart, he lost the original data. The charts are shown below:

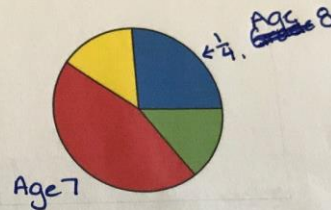
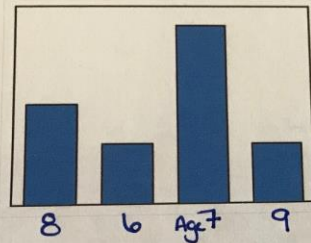


Tanner did remember that 6 students in the survey answered six for their age. He also remembered that  $\frac{1}{4}$  of the students surveyed answered eight for their age, and that the most popular answer was age seven. Based on this information, complete the table below:

Age	Number of Students
six	6
seven	
eight	
nine	



Tanner randomly surveyed 40 students in his school about their ages. The ages given were six, seven, eight, and nine. After gathering the answers, he drew a bar chart and a pie chart to show the results. Unfortunately, before he labelled each chart, he lost the original data. The charts are shown below:



Tanner did remember that 6 students in the survey answered six for their age. He also remembered that  $\frac{1}{4}$  of the students surveyed answered eight for their age, and that the most popular answer was age seven. Based on this information, complete the table below:

Age 6, 9 are the smaller 2 equal pieces

Age	Number of Students
six	6
seven	18
eight	10
nine	6

this is the blue section in the pie chart

$\leftarrow 40 - 10 - 6 - 6$   
 $\rightarrow \frac{1}{4}$  of 40 students is 10.

# Lost Data Problem

## One potential solution

# Would You Rather?



**Have Cheez-It's® to cover a rectangle with..**

**A length of 9 and  
a perimeter of 22**



**A length of 5 and  
a perimeter of 20**

wouldyourathermath.com

Explain your reasoning using mathematics.

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

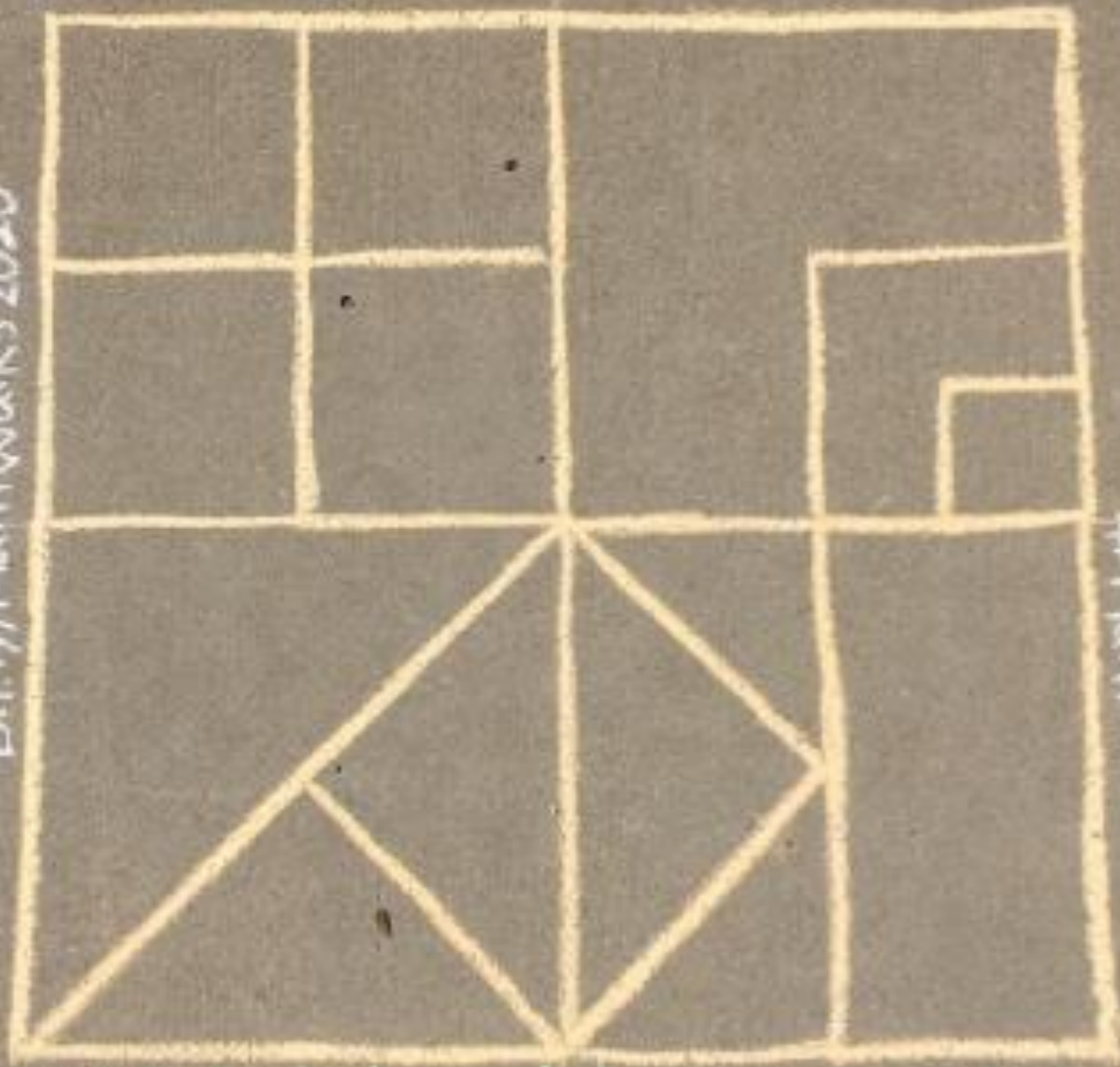
Option A	Or	Option B
	Break it down	
Conclusion: I would rather		
Because ...		



What creative ways can you  
shade  $\frac{1}{8}$ ?



bit.ly/mathwalks2020



#mathwalk

How many different ways can you shade  $\frac{1}{8}$ ?

How many different ways can you shade  $\frac{1}{4}$ ?

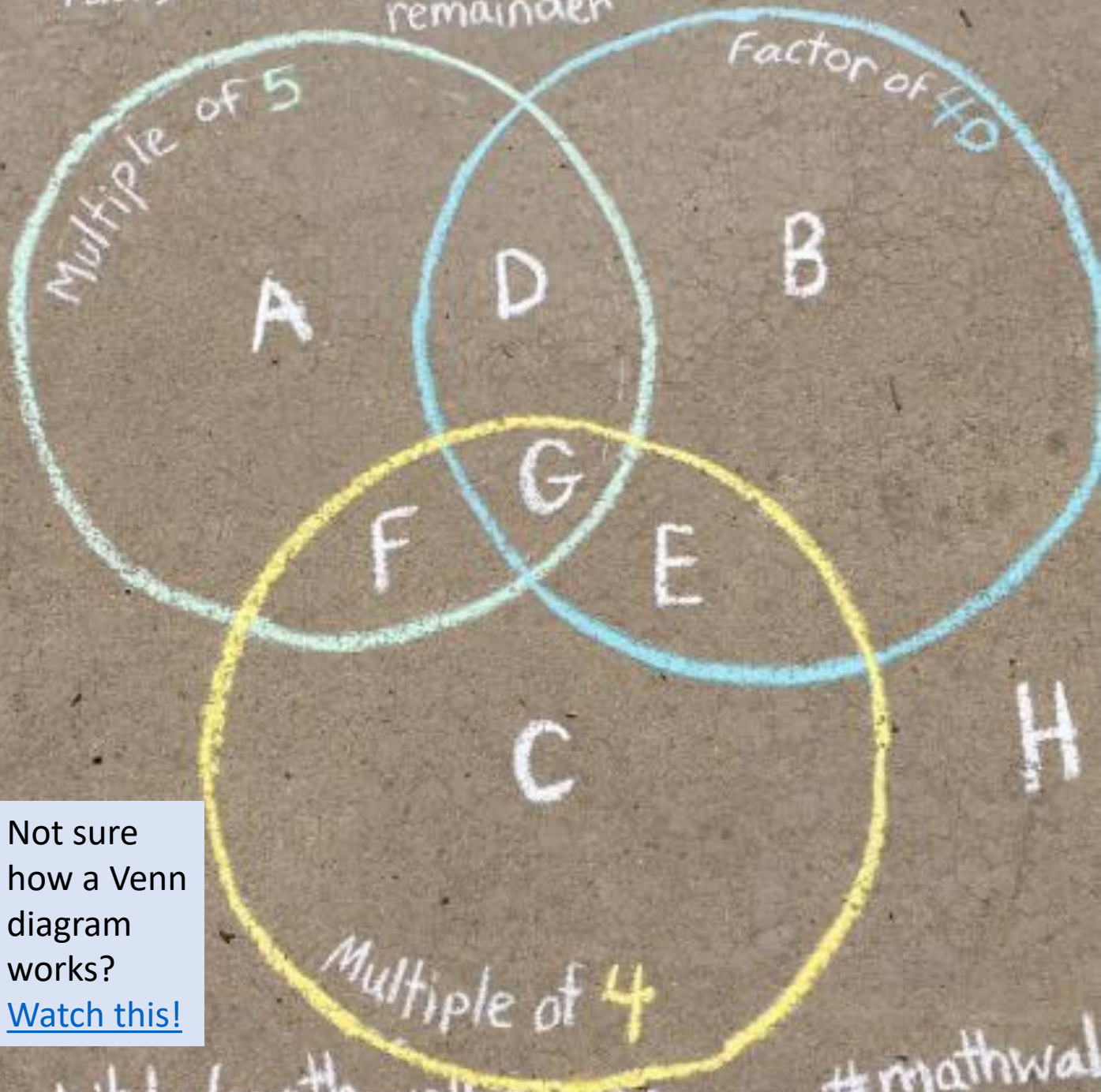
Can you create a problem of your own? Share it outside and see if others can solve it!



For each region, find a number  
(if possible)



factor: number that divides with no  
remainder

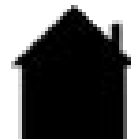


Not sure  
how a Venn  
diagram  
works?

[Watch this!](https://www.youtube.com/watch?v=1j8v8v8v8v8)

[bit.ly/mathwalks2020](https://bit.ly/mathwalks2020)

#mathwalks

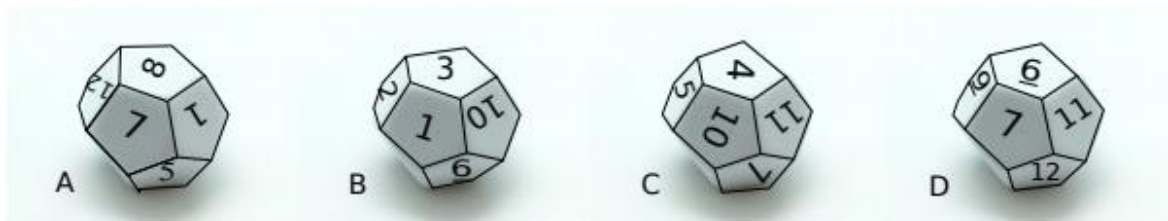


## Problem of the Week

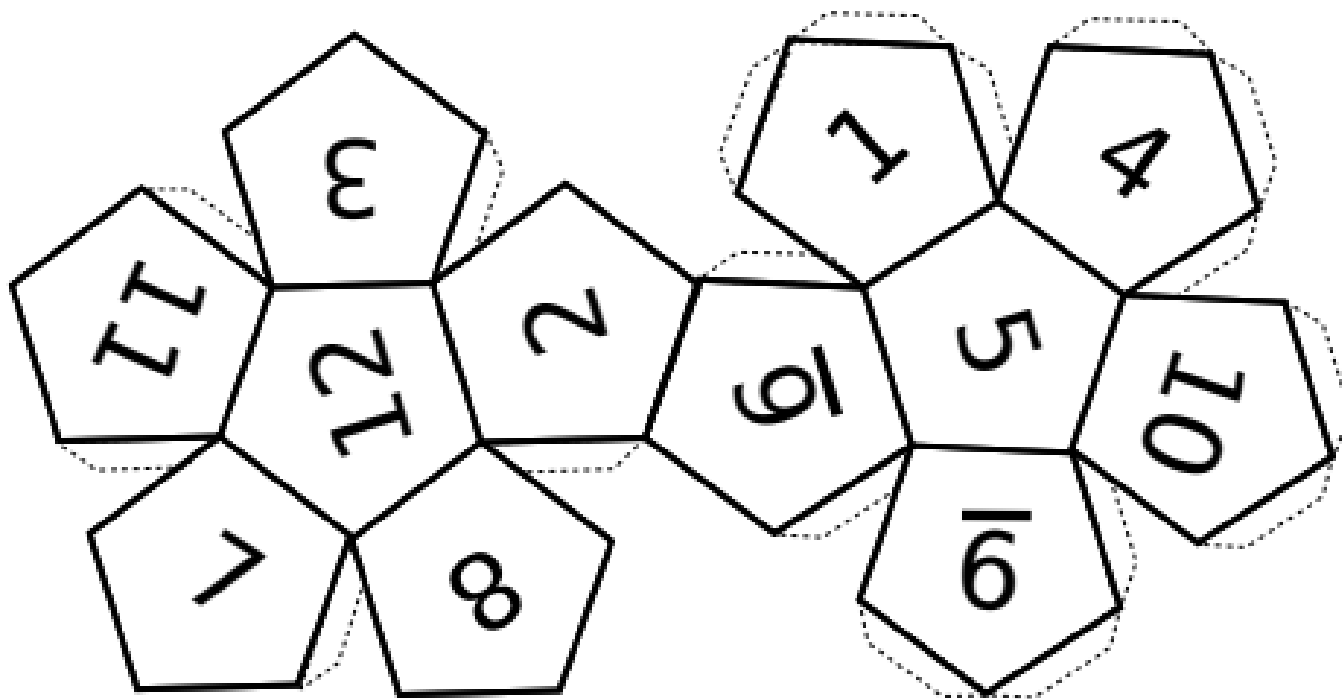
### Problem B

#### Deese Dice are D12s

Dice A, B, C, and D shown below are also known as D12s. A D12 is a 12-sided die with a distinct number from the set  $\{1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12\}$  on each side.

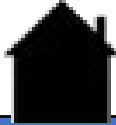


One of the four dice above can be made from the net shown below.  
Which of A, B, C, or D corresponds to the given net?



# 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"><li>❑ Problem Solving</li><li>❑ Reasoning and Proving</li><li>❑ Reflecting</li></ul>	<ul style="list-style-type: none"><li>❑ Selecting Tools and Computational Strategies</li><li>❑ Connecting</li></ul>	<ul style="list-style-type: none"><li>❑ Representing</li><li>❑ Communicating</li></ul>
Number Sense and Numeration	<ul style="list-style-type: none"><li>❑ read, represent, compare, and order whole numbers to 10 000, decimal numbers to tenths, and simple fractions, and represent money amounts to \$100</li><li>❑ demonstrate an understanding of magnitude by counting forward and backwards by 0.1 and by fractional amounts</li><li>❑ 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</li><li>❑ demonstrate an understanding of proportional reasoning by investigating whole-number unit rates</li></ul>	<ul style="list-style-type: none"><li>❑ read, represent, compare, and order whole numbers to 100 000, decimal numbers to hundredths, proper and improper fractions, and mixed numbers</li><li>❑ demonstrate an understanding of magnitude by counting forward and backwards by 0.01</li><li>❑ 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;</li><li>❑ demonstrate an understanding of proportional reasoning by investigating whole-number rates.</li></ul>	<ul style="list-style-type: none"><li>❑ read, represent, compare, and order whole numbers to 1 000 000, decimal numbers to thousandths, proper and improper fractions, and mixed numbers</li><li>❑ 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</li><li>❑ demonstrate an understanding of relationships involving percent, ratio, and unit rate</li></ul>
Patterning and Algebra	<ul style="list-style-type: none"><li>❑ describe, extend, and create a variety of numeric and geometric patterns, make predictions related to the patterns, and investigate repeating patterns involving reflections;</li><li>❑ demonstrate an understanding of equality between pairs of expressions, using addition, subtraction, and multiplication</li></ul>	<ul style="list-style-type: none"><li>❑ determine, through investigation using a table of values, relationships in growing and shrinking patterns, and investigate repeating patterns involving translations;</li><li>❑ demonstrate, through investigation, an understanding of the use of variables in equations.</li></ul>	<ul style="list-style-type: none"><li>❑ describe and represent relationships in growing and shrinking patterns (where the terms are whole numbers), and investigate repeating patterns involving rotations;</li><li>❑ use variables in simple algebraic expressions and equations to describe relationships.</li></ul>
Measurement	<ul style="list-style-type: none"><li>❑ estimate, measure, and record length, perimeter, area, mass, capacity, volume, elapsed time, using a variety of strategies</li><li>❑ determine the relationships among units and measurable attributes, including the area and perimeter of rectangles.</li></ul>	<ul style="list-style-type: none"><li>❑ 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</li><li>❑ measure and record temperatures to determine and represent temperature changes over time</li><li>❑ estimate and measure the perimeter and area of regular and irregular polygons, using a variety of tools and strategies.</li></ul>	<ul style="list-style-type: none"><li>❑ estimate, measure, and record quantities, using the metric measurement system;</li><li>❑ 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.</li></ul>
Geometry and Spatial Sense	<ul style="list-style-type: none"><li>❑ identify quadrilaterals and three-dimensional figures and classify them by their geometric properties, and compare various angles to benchmarks;</li><li>❑ construct three-dimensional figures, using two-dimensional shapes;</li><li>❑ identify and describe the location of an object, using a grid map, and reflect two-dimensional shapes</li></ul>	<ul style="list-style-type: none"><li>❑ identify and classify two-dimensional shapes by side and angle properties, and compare and sort three-dimensional figures;</li><li>❑ identify and construct nets of prisms and pyramids;</li><li>❑ identify and describe the location of an object, using the cardinal directions, and translate two-dimensional shapes</li></ul>	<ul style="list-style-type: none"><li>❑ classify and construct polygons and angles;</li><li>❑ sketch three-dimensional figures, and construct three-dimensional figures from drawings;</li><li>❑ describe location in the first quadrant of a coordinate system, and rotate two-dimensional shapes</li></ul>
Data Management and Probability	<ul style="list-style-type: none"><li>❑ collect and organize discrete primary data and display the data using charts and graphs, including stem-and-leaf plots and double bar graphs</li><li>❑ read, describe, and interpret primary data and secondary data presented in charts and graphs, including stem-and-leaf plots and double bar graphs</li><li>❑ predict the results of a simple probability experiment, then conduct the experiment and compare the prediction to the results</li></ul>	<ul style="list-style-type: none"><li>❑ collect and organize discrete or continuous primary data and secondary data and display the data using charts and graphs, including broken-line graphs</li><li>❑ read, describe, and interpret primary data and secondary data presented in charts and graphs, including broken-line graphs</li><li>❑ represent as a fraction the probability that a specific outcome will occur in a simple probability experiment, using systematic lists and area models.</li></ul>	<ul style="list-style-type: none"><li>❑ collect and organize discrete or continuous primary data and secondary data and display the data using charts and graphs, including continuous line graphs;</li><li>❑ read, describe, and interpret data, and explain relationships between sets of data;</li><li>❑ determine the theoretical probability of an outcome in a probability experiment and use it to predict the frequency of the outcome.</li></ul>