Day 1

Standard Algorithm (Source: mathlearningcenter.org)

Maria is practicing solving problems using the standard algorithm for multiplication. She knows the first step, but then she gets stuck. Finish these problems Maria started.

$$\begin{array}{r} {\scriptstyle 6}\\ 38\\ \times\ 28\\ \hline 4 \end{array} \qquad \begin{array}{r} {\scriptstyle 2}\\ 84\\ \times\ 37\\ \hline 8 \end{array} \qquad \begin{array}{r} {\scriptstyle 4}\\ 26\\ \times\ 97\\ \hline 182 \end{array}$$

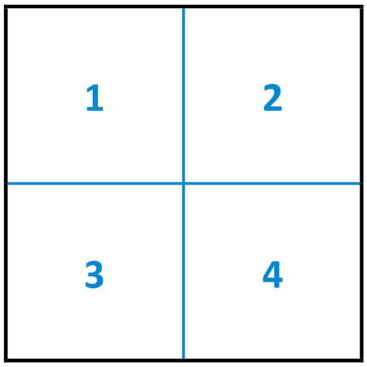
Balanced Equation

Use the operation symbols (+, -, x, and ÷) to make the equation true. Operations may be used more than once. (Source: https://www.openmiddle.com/)

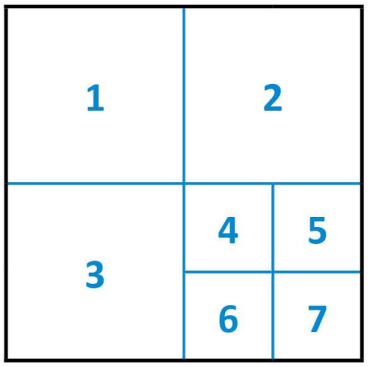
$$2 \square (3 \square 7 \square 9) = (1 \square 5) \square (8 \square 4)$$

Square Cakes (Source: https://playwithyourmath.com/)

For my party, I want a square cake with square slices. How many people can I have at my party?



Party for 4



Party for 7

Day 2

Standard Multiplication Algorithm (Source: mathlearningcenter.org)

Solve each problem using the standard multiplication algorithm.

706	519	405
× 28	× 37	× 46

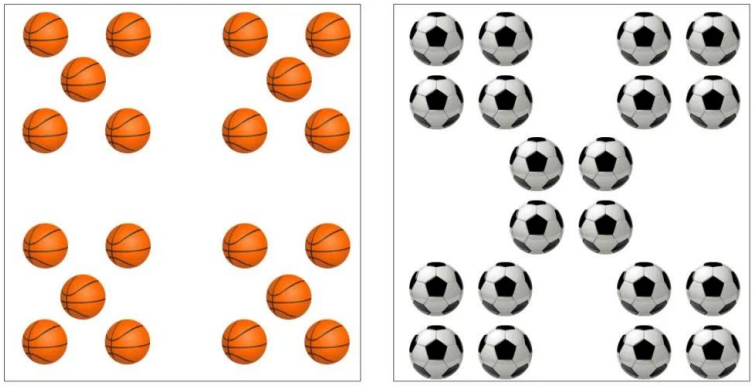
Pig Game

Materials: dice, pencil and paper.

Pig is a game for 2 or more players. Players take turns rolling the die as many times as they like. If a roll is a 2, 3, 4, 5, or 6, the player adds that many points to their score for the turn. A player may choose to end their turn at any time and "bank" their points. If a player rolls a 1, they lose all their unbanked points and their turn is over. Play to 50. (Source: mathforlove.org)

Noticing

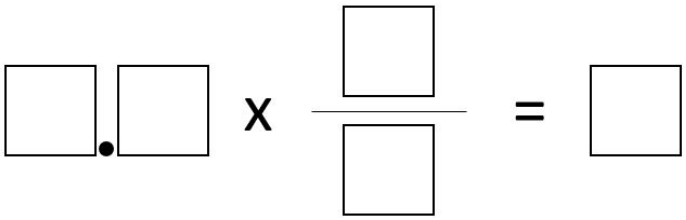
On a piece of paper, make two columns. In one column, list the things that are the same in this picture, and in the other column, list the things that are different. (Source: https://samedifferentimages.wordpress.com/)



Day 3

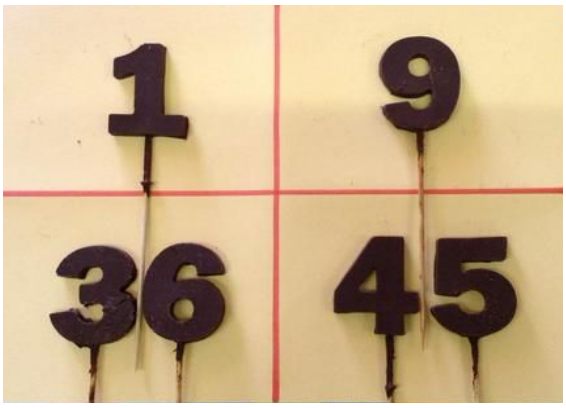
Multiplying a Decimal by a Fraction to Get a Whole Number (Source: https://www.openmiddle.com/)

Using the digits 1 to 9, at most one time each, fill in the boxes to make a true statement.



Which One Doesn't Belong? (Source: wodb.ca)

Choose a number in this picture that you don't think belongs with the rest. Explain why. Can you pick another number and give a different reason?



Word Problem (Source: mathlearningcenter.org)

Whitney's 9 cousins are coming to visit, and she wants to make them each a little gift bag. She wants to put an equal number of little candies in each bag, eat 3 candies herself, and have none left over.

Candy	Candies per Bag
Lemon Sours	147
Strawberry Kisses	216
Pineapple Sweets	193

A. Which bag of candies should she buy? Show all of your work. *Hint*: Can you remember a divisibility rule to help?

B. How many candies will each cousin get? Show all your work.

Day 4

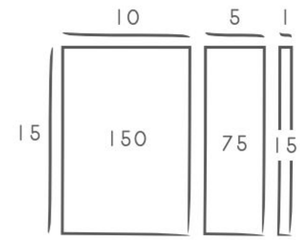
Division Problems (Source: mathlearningcenter.org)

Solve the division problems below. For each one, complete the ratio table first. Then you can solve the problem using only numbers, or you can use sketches and numbers together. You can also add more entries to the ratio table if you want to. The first problem has been done for you as an example.

ex

```
  1 \
  5  } 16
 10 /
15) 240
   -150
     90
    -75
     15
    -15
      0
```

Number of Groups	1	10	20	5	
Total	15	150	300	75	



10 + 5 + 1 = 16

so, 240 ÷ 15 = 16

16)272

Number of Groups	1	10	20	5			
Total	16						

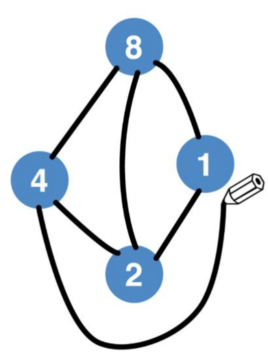
12)216

Number of Groups	1	10	20	5			
Total	12						

X-Factor (Source: https://playwithyourmath.com/)

To make an 8-factor graph:

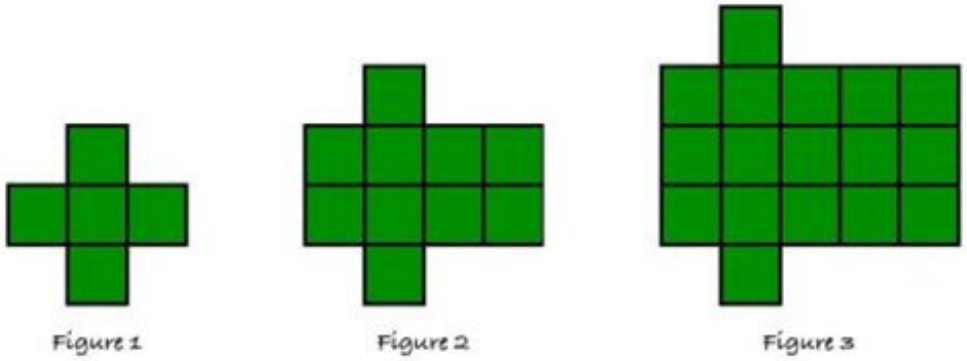
- ❏ List all of 8's factors.
- ❏ Connect each factor to **its** factors...
- ❏ Making sure NO paths cross.



Visual Pattern (Source: visualpatterns.org)

Below is a pattern of squares in stages 1-3 below.

A. Draw what you think stage 4 might look like.
B. Draw or describe what you think stage 10 might look like.
C. Label how many squares are in each stage.



Day 5

Fractions of Wholes (Source: mathlearningcenter.org)

Find the products.

a $\frac{1}{4}$ of 6 = _____ **b** $\frac{1}{5} \times 30$ = _____ **c** $\frac{1}{3}$ of 27 = _____

d $\frac{3}{4}$ of 6 = _____ **e** $\frac{4}{5} \times 30$ = _____ **f** $\frac{2}{3} \times 27$ = _____

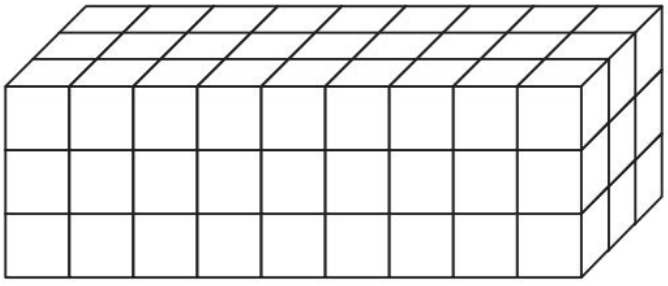
Story Problem (Source: mathlearningcenter.org)

Six friends had lunch together and decided to split the bill evenly.

A. If the bill was $48.60, what was each person's share? Show your work.
B. After tax and tip, the bill totaled $63.00. What was each person's share? Show your work.

Rectangular Prism (Source: mathlearningcenter.org)

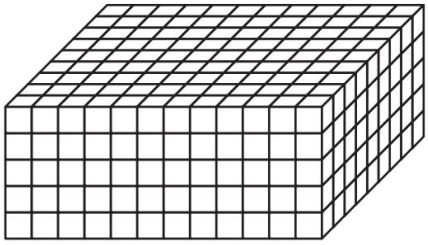
Fill in the dimensions of this box: _____ × _____ × _____



Day 1

Ping-Pong Balls (Source: mathlearningcenter.org)

Piper brought this box of ping-pong balls to practice.



A. How many ping-pong balls does the box hold if one ping-pong ball fits in a 1 unit x 1 unit x 1 unit space?

B. How much cardboard does it take to make the box?

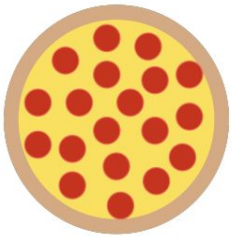
Multiplying Fractions to Make a Whole Number (Source: https://www.openmiddle.com/)

Using the digits 1 to 9, at most one time each, place a digit in each box to make a whole number product.

$$\frac{\square}{\square} \times \frac{\square}{\square} = \square$$

Straight Cuts (Source: https://brilliant.org/)

What is the maximum number of pieces you can divide a circular pizza into with 4 cuts? (All cuts must be distinct straight lines from one point on the edge of the pizza to another point on the edge of the pizza, and you may not move the pizza slices.)



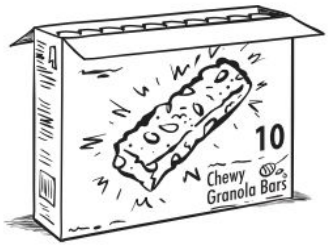
Day 2

Agree or Disagree? (Source: mathlearningcenter.org)

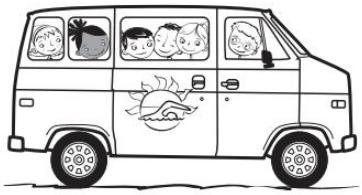
For each problem, write whether you agree or disagree. Then explain your thinking using numbers, words, and/ or labeled sketches.

A. The track at the high school is 400 meters. After she ran 6 times around the track, Isuko said she'd gone more than 2 kilometers.

B. Mr. Madison needs 175 granola bars for the 5th grade field trip. The bars come in boxes of 10. He'll need to buy 17 boxes to have enough.

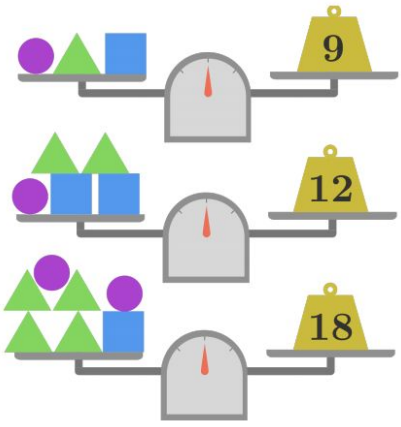


C. There are 46 kids in the After-School Club. Today they're going to the pool at the Community Center. If each minivan can take 6 kids, they'll need 8 minivans for all the kids.



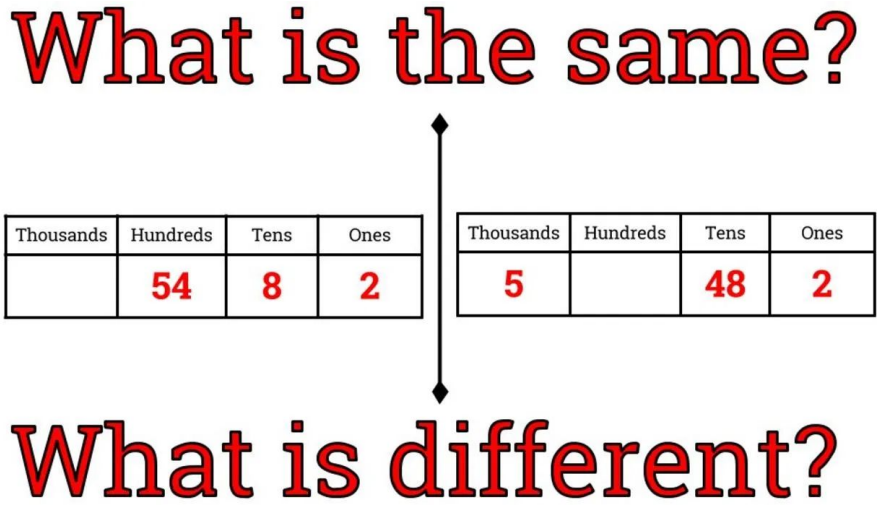
Balanced Scales (Source: https://brilliant.org/)

All the scales shown are perfectly balanced. What is the weight of one triangle?



Noticing (Source: https://samedifferentimages.wordpress.com/)

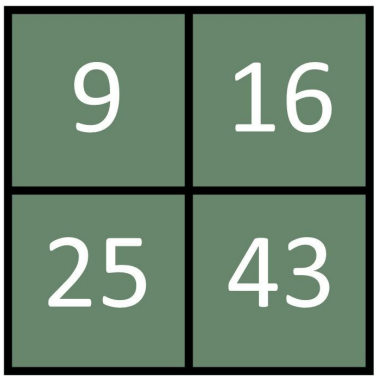
On a piece of paper, make two columns. In one column, list the things that are the same in this picture, and in the other column, list the things that are different.



Day 3

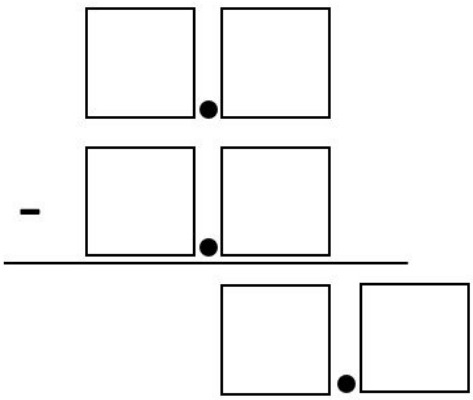
Which One Doesn't Belong? (Source: wodb.ca)

Choose a number in this picture that you don't think belongs with the rest. Explain why. Can you pick another number and give a different reason?



Subtracting Numbers to Get Close to Zero (Source: https://www.openmiddle.com/)

Using the digits 1-9, subtract two numbers to get a difference closest to 0.



Rounding (Source: mathlearningcenter.org)

Fill in the table to round numbers to the nearest ten, one, tenth, and hundredth.

Round to the Nearest:	Ten	One	Tenth	Hundredth
506.308				
715.071				
80.916				

Day 4

A Strobogrammatic Number (Source: https://brilliant.org/)

A strobogrammatic number is one where (with certain fonts) the number looks the same when rotated 180 degrees (an example is shown above, the year 1961). The possible digits are 0, 1, 6, 8, and 9.

When is the next year (after 2020) that will be strobogrammatic?

0 1 2 3 4
5 6 7 8 9

Your answer:

Ratio Tables (Source: mathlearningcenter.org)

Maria is planning to make friendship bracelets to sell at the farmers' market. Each bracelet costs $1.25 to make. Use the ratio table to show your strategy for finding the cost to make 19 bracelets.

Number of Bracelets	1								
Cost ($)	1.25								

The cost to make 19 bracelets is _____.

Use the ratio table to show your strategy for finding how many bracelets Maria can make for $126.25.

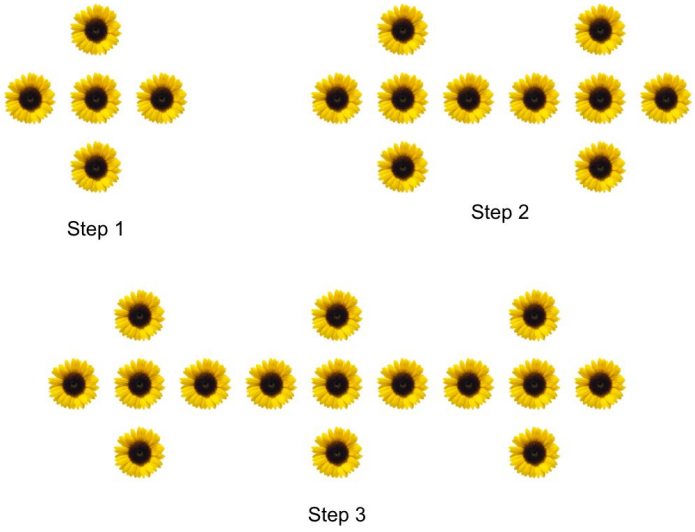
Number of Bracelets	1								
Cost ($)	1.25								

Maria can make _____ bracelets for $126.25.

Visual Pattern (Source: visualpatterns.org)

Below is a pattern of sunflowers in steps 1-3 below.

A. Draw what you think step 4 might look like.
B. Draw or describe what you think step 10 might look like.
C. Label how many sunflowers are in each stage.



Day 5

Evaluating Expressions (Source: mathlearningcenter.org)

Evaluate each of the following.

A. $6 \times (5 \times 12) =$ ____

B. $(18 \times 13) + (2 \times 13) =$ ____

C. $(75 \div 3) \times 10 =$ ____

D. $(117 \times 4) - (7 \times 4) =$ ____

Valentine's Day (Source: mathlearningcenter.org)

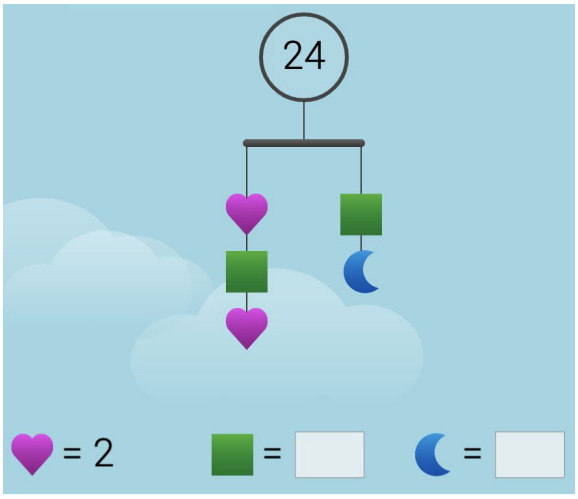
Billy made 60 cards to give away on Valentine's Day.
Help Billy figure out how many cards he will give to his family, his teachers, and his friends. Show your work.

A. If Billy gives 1/3 of his cards to his family, how many cards does Billy give his family?

B. If Billy gives 1/4 of his cards to his teachers, how many cards does Billy give his teachers?

Mobile (Source: https://solveme.edc.org/Mobiles.html)

What is the value of the square? The crescent?



Mathematics Grade 5
Remote Learning Activities

WEEK 3

Day 1

Fractions of Wholes (Source: mathlearningcenter.org)

True or False?

a $\frac{1}{4} \times 9 = 2\frac{1}{4}$ T F

b $\frac{3}{5}$ of $25 = 15$ T F

c $\frac{2}{5}$ of $15 = 5\frac{2}{5}$ T F

d $18 \times \frac{1}{5} = \frac{5}{18}$ T F

e $\frac{2}{6} \times 24 = 14$ T F

f $17 \times \frac{1}{3} = \frac{17}{3}$ T F

Paintings (Source: mathlearningcenter.org)

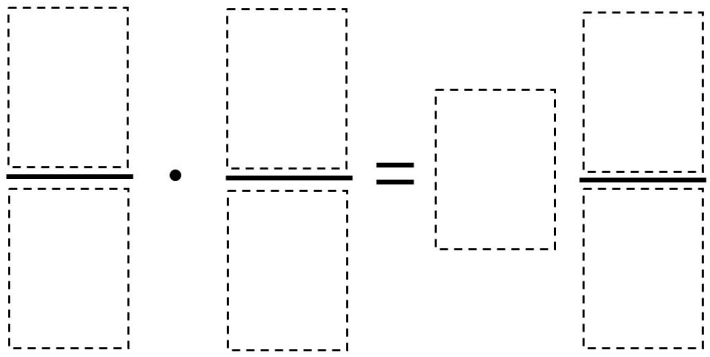
Vivian loves to paint in the evenings after school. She is working on three paintings. She needs 4 brushes, 3 canvases, and 12 small tubes of paint. Brushes cost $0.75 each, canvases cost $5.99 each, and tubes of paint costs $1.89 each.

A. Write an expression to determine Vivian's cost, then solve the problem.

B. Help Vivian determine the average cost per painting. Write an expression and then solve the problem.

Multiplying Fractions (Source: https://www.openmiddle.com/)

Using the digits 1 to 9 at most once each time, fill the boxes to make the greatest possible product.



Day 2

Beat the Calculator (Source: mathlearningcenter.org)

Jamal is playing Beat the Calculator: Fractions. Help Jamal solve the following problems. Show your work.

a $1\frac{1}{5} - \frac{3}{10} = \_\_\_\_\_$

b $\frac{1}{3} + \frac{1}{4} + \frac{1}{2} = \_\_\_\_\_$

c $(\frac{7}{8} - \frac{1}{4}) - (\frac{5}{5} - \frac{3}{3}) = \_\_\_\_\_$

d $\frac{12}{24} + \frac{18}{36} + \frac{24}{48} = \_\_\_\_\_$

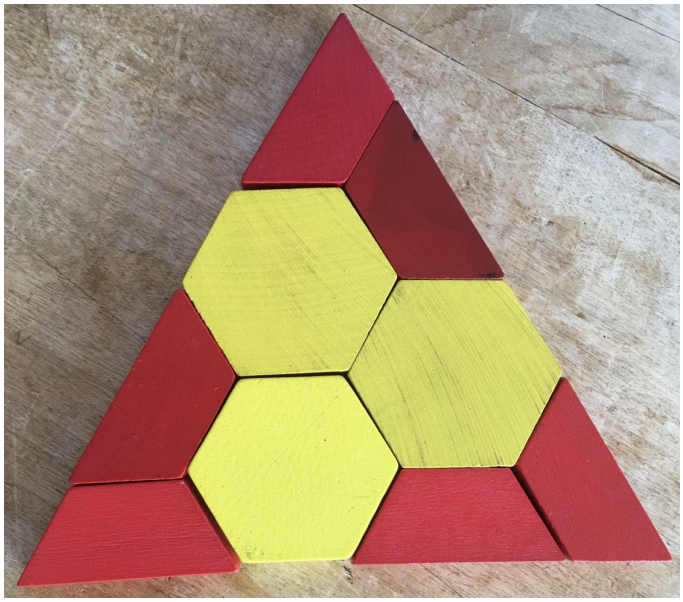
Comparing Fractions (Source: https://brilliant.org/)

Which fraction is largest? Explain how you made your decision.

$$\frac{1110}{1111}, \frac{2221}{2223}, \frac{3331}{3334}$$

Counting (Source: mathforlove.org)

How many do you see? What did you count? How did you count them?



Day 3

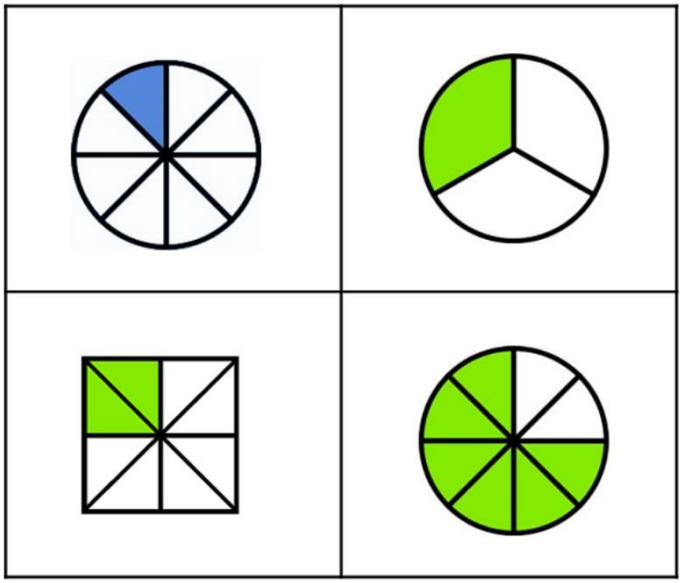
Puzzle (Source: https://brilliant.org/)

Place only a + or − in every ▯ to make the equation true.

$$2 \square 3 \square 5 \square 6 = 10$$

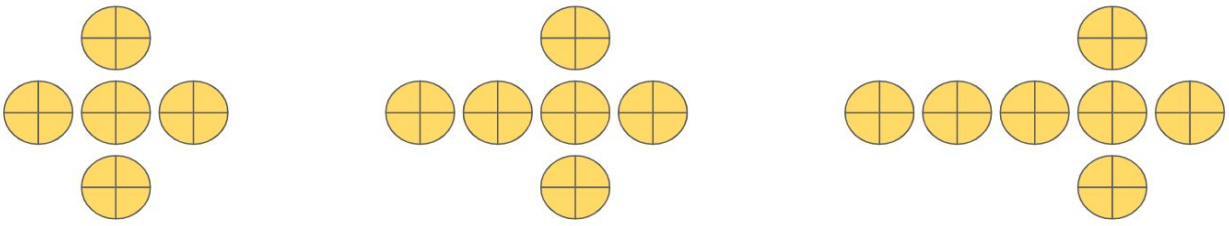
Which One Doesn't Belong? (http://wodb.ca/)

Choose one graph in this picture that you don't think belongs with the rest. Explain why. Can you pick another graph and give a different reason?



Visual Pattern (Source: visualpatterns.org

Below is a pattern of circles in stages 1-3 below. Draw what you think stage 4 might look like. Label how many circles are in each stage.



Day 4

Fractions Practice (Source: mathlearningcenter.org)

True or False?

a $3 \times \frac{4}{5} = 4 \times \frac{3}{5}$ T F

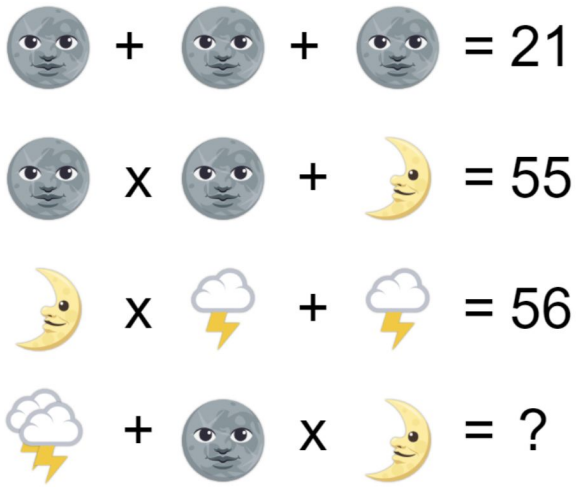
b $3 \times \frac{4}{5} = 5 \times \frac{3}{4}$ T F

c $3 \times \frac{4}{5} = \frac{4}{5} \times 3$ T F

Madison and Noah are reading new books from the library. Noah has read 3/8 of his book, which has 72 pages. Madison has read 3/5 of her book, which has 55 pages. Who has read more pages? How do you know? Show your work.

Puzzle (Source: https://www.solvemoji.com/)

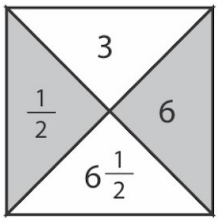
What is the value of the last row?



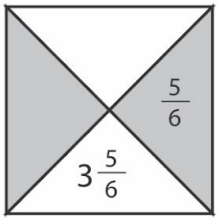
Practice (Source: mathlearningcenter.org)

Complete the box challenges.

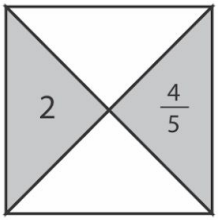
ex



a



b



Find the product of each.

a $11 \times \frac{1}{8} =$

b $\frac{3}{8} \times 16 =$

c $\frac{7}{3} \times 12 =$

d $15 \times \frac{2}{3} =$

Day 5

Using a Ratio Table (Source: mathlearningcenter.org)

Fill in the ratio table for 23.

Number of Groups	1	2	10	5	20	15			
Total	23								

Solve these two division problems using the ratio table above. You can add to the ratio table if you want to.

ex $368 \div 23 =$ 16

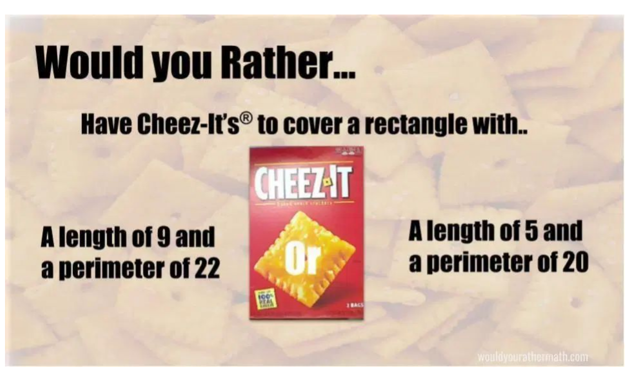
```
          1 ]
          5 ] 16
         10 ]
   23 ⟌ 368
      - 230
        138
      - 115
         23
      -  23
          0
```

a $529 \div 23 =$ _____

b $414 \div 23 =$ _____

Would You Rather (Source: https://www.wouldyourathermath.com/)

Whichever option you choose, justify your reasoning with mathematics.



LCM (Source: mathlearningcenter.org)

Find the least common multiple of each pair of numbers.

ex	The least common multiple of 8 and 28 is 56. multiples of 28: 28, (56) multiples of 8: 8, 16, 24, 32, 40, 48, (56)	**a**	The least common multiple of 8 and 12 is _____. multiples of 12: multiples of 8:
b	The least common multiple of 6 and 15 is _____. multiples of 15: multiples of 6:	**c**	The least common multiple of 6 and 14 is _____. multiples of 14: multiples of 6:

Rewrite each pair of fractions with a common denominator. (Use the least common multiples above to help.) Then use a <, >, or = to compare them in two expressions.

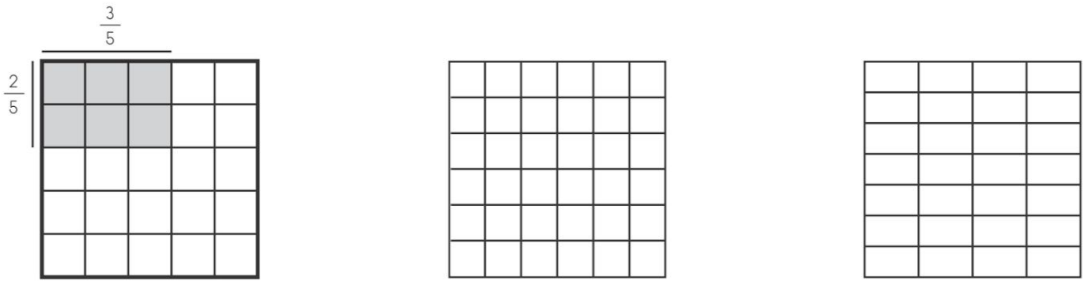
Fractions	Rewritten with Common Denominator	Expressions
ex $\frac{6}{8}$ and $\frac{17}{28}$	$\frac{6 \times 7}{8 \times 7} = \frac{42}{56}$ $\quad \frac{17 \times 2}{28 \times 2} = \frac{34}{56}$	$\frac{42}{56} > \frac{34}{56}$ so $\frac{6}{8} > \frac{17}{28}$
a $\frac{5}{8}$ and $\frac{9}{12}$	$\frac{5 \times \_\_}{8 \times \_\_} = \frac{\_\_}{\_\_}$ $\quad \frac{9 \times \_\_}{12 \times \_\_} = \frac{\_\_}{\_\_}$	so $\frac{5}{8} \_\_ \frac{9}{12}$
b $\frac{4}{6}$ and $\frac{12}{15}$	$\frac{4 \times \_\_}{6 \times \_\_} = \frac{\_\_}{\_\_}$ $\quad \frac{12 \times \_\_}{15 \times \_\_} = \frac{\_\_}{\_\_}$	so $\frac{4}{6} \_\_ \frac{12}{15}$
c $\frac{5}{6}$ and $\frac{11}{14}$	$\frac{5 \times \_\_}{6 \times \_\_} = \frac{\_\_}{\_\_}$ $\quad \frac{11 \times \_\_}{14 \times \_\_} = \frac{\_\_}{\_\_}$	so $\frac{5}{6} \_\_ \frac{11}{14}$

Day 1

Fraction Multiplication Models (Source: mathlearningcenter.org)

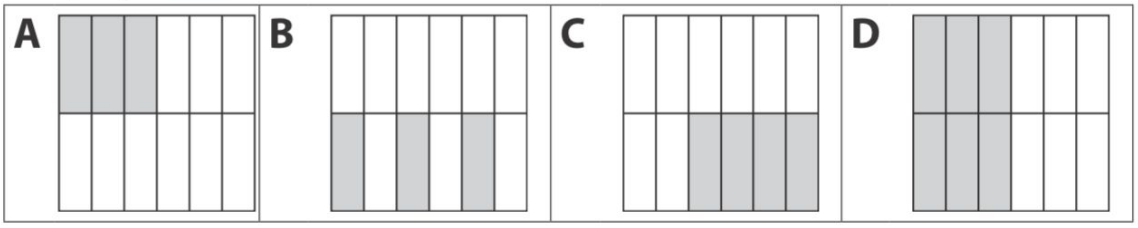
Use the grid to model and solve each combination. Remember to outline a rectangle to represent the whole first.

ex $\frac{2}{5} \times \frac{3}{5} = \frac{6}{25}$ **a** $\frac{5}{6} \times \frac{5}{6} =$ **b** $\frac{3}{7} \times \frac{2}{4} =$

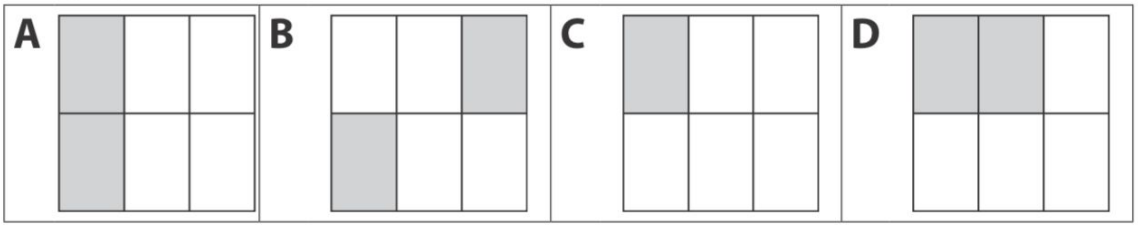


Circle the picture that best represents each equation. Then solve the equation.

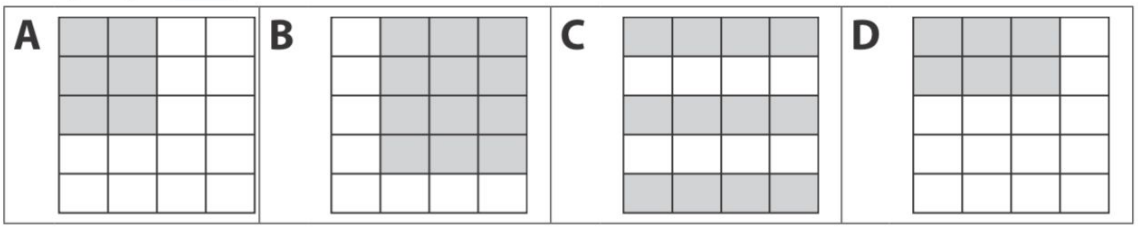
a $\frac{1}{2} \times \frac{3}{6} =$



b $\frac{1}{2} \times \frac{1}{3} =$

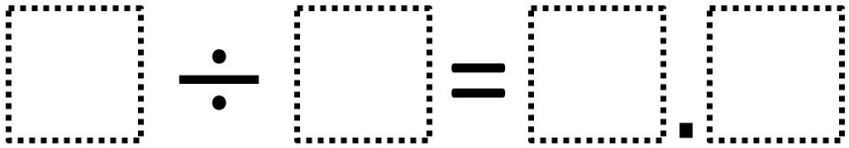


c $\frac{2}{5} \times \frac{3}{4} =$



Dividing Whole Numbers With A Decimal Quotient
(Source: https://www.openmiddle.com/)

Using the digits 1 to 9 at most one time each, place a digit in each box to make a true statement.



Word Problems (Source: mathlearningcenter.org)

Betsy has $14.25 and her brother has $16.00. They want to buy two water guns that cost $12.99 each and a bag of water balloons that costs $4.79.

A. Do they have enough money? If so, how much money will they have left over? If not, how much more money do they need? Show your work.

B. If Betsy earns another $6, will they have enough money to buy two water guns and two bags of water balloons? Show your work.

Day 2

Matching Equations to Stories (Source: mathlearningcenter.org)

Circle the equation that matches each story problem. Then fill in the correct answer.

A. Alexus and her 2 sisters picked 48 strawberries and shared them equally. How many strawberries did each girl get?

$48 \div 2 =$	$3 \times 48 =$	$48 \div 3 =$	$48 - 3 =$

B. Miguel is making valentines. It takes 12 of a sheet of paper for each valentine, and Miguel wants to make 26 valentines. How many sheets of paper will he need?

$26 \div \frac{1}{2} =$	$26 \times \frac{1}{2} =$	$26 \times 2 =$	$26 - \frac{1}{2} =$

C. Ling and her mother are making dumplings. It takes 34 of an ounce of meat for each dumpling, and they are going to make 36 dumplings. How many ounces of meat will they need?

$36 \times 4 =$	$3 \times 36 =$	$34 \div 36 =$	$36 \times 34 =$

More Likely (Source: https://brilliant.org/)

Which of these statements about John is more likely to be true?

- ❏ John is over 7 feet tall
- ❏ John is a professional basketball player and is over 7 feet tall

The “100” Game (Source: https://brilliant.org/)

Edgar and Beatrix are playing the "100" game, with the following rules:

- The first player picks any number from 1 to 7.
- After that, the players take turns adding a value from 1 to 7 to the previous number.
- The first player to reach 100 (or exceed it) **loses**.

Day 3

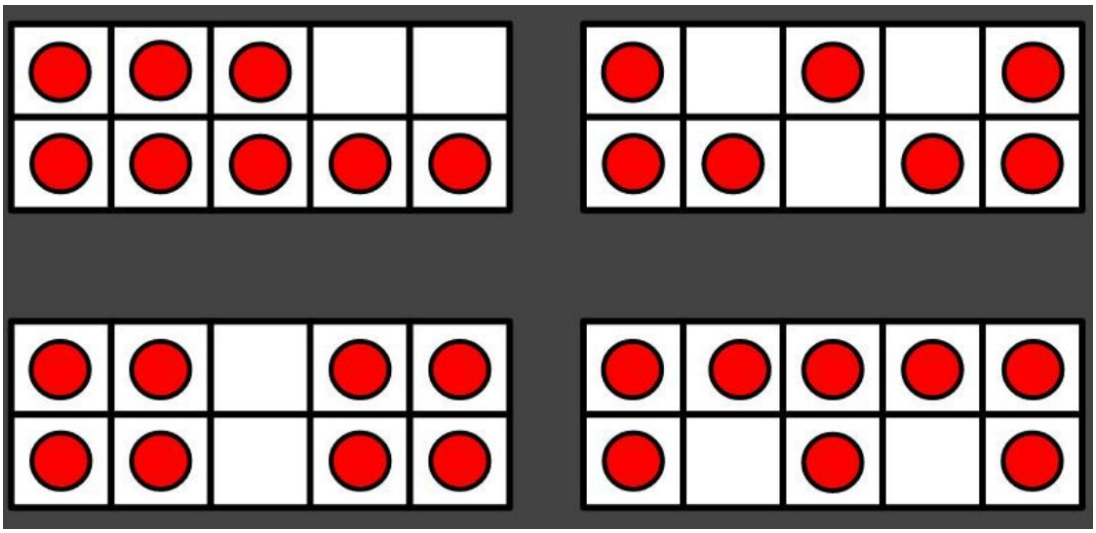
Puzzle (Source: https://brilliant.org/)

If we replace each ▯ with a +, −, ×, or ÷, can we make this equation true?

$$8 \square 4 \square 2 \square 12 \square 4 = 3$$

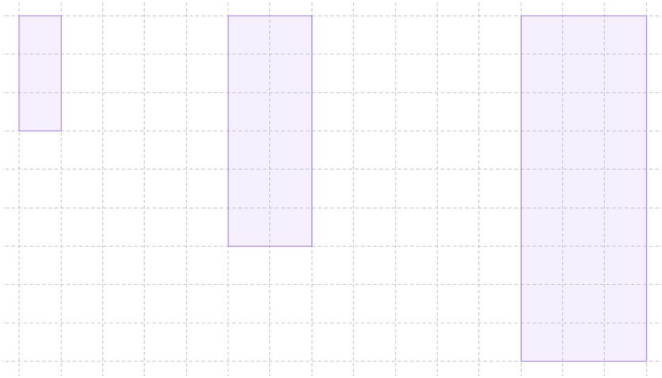
Which One Doesn’t Belong? (http://wodb.ca/)

Choose one graph in this picture that you don’t think belongs with the rest. Explain why. Can you pick another graph and give a different reason?



Visual Pattern (Source: visualpatterns.org

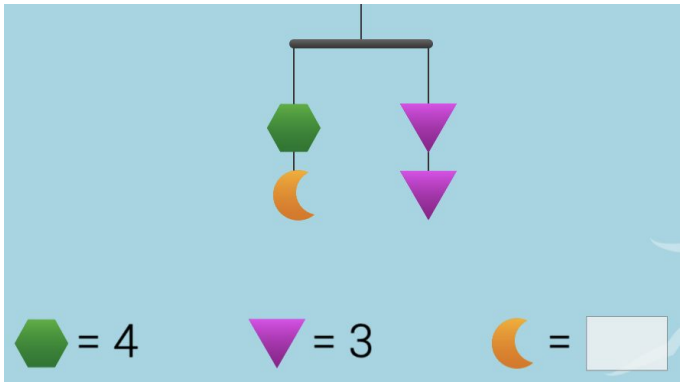
Below is a pattern of circles in stages 1-3 below. Draw what you think stage 4 might look like. Label how many circles are in each stage.



Day 4

Mobile (Source: https://solveme.edc.org/Mobiles.html/)

What is the value of the crescent?



Multiplication Problems (Source: mathlearningcenter.org)

Solve each multiplication problem, and give the answer as a mixed number. Show all your work.

$4 \times \frac{5}{8} =$ _____	$12 \times \frac{2}{3} =$ _____	$\frac{3}{5} \times 6 =$ _____

Write a story problem for one of the problems above.

Operating with Fractions & Whole Numbers (Source: mathlearningcenter.org)

Solve each of the story problems below. For each problem:

- Choose and circle one of the numbers in parentheses, depending on how challenging you want the problem to be.
- Write an expression to represent your problem.
- Use numbers, labeled visual models, or words to solve the problem and explain your strategy.
- Complete the sentence below with your solution to the problem.

a It takes ($\frac{1}{2}$, $\frac{1}{3}$, $\frac{3}{4}$, $\frac{2}{3}$) of a cup of flour to make a batch of pancakes. I have 4 cups of flour. How many batches of pancakes can I make?

Expression: _____

I can make _____ batches of pancakes.

b Little Snail can crawl ($\frac{1}{4}$, $\frac{1}{3}$, $\frac{3}{4}$, $\frac{7}{8}$) of a mile a day. How far can he crawl in 5 days if he crawls the same distance each day?

Expression: _____

Little Snail can crawl _____ miles in 5 days.

c Keiko always takes her water bottle with her when she hikes, and she always drinks half a liter of water for every mile she hikes. Yesterday, she hiked $\frac{3}{4}$ a mile. What fraction of a liter of water did she drink?

Expression: _____

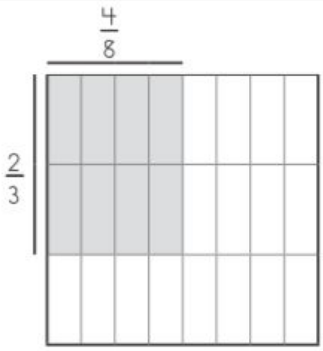
Keiko drank _____ of a liter of water.

Day 5

More Practice (Source: mathlearningcenter.org)

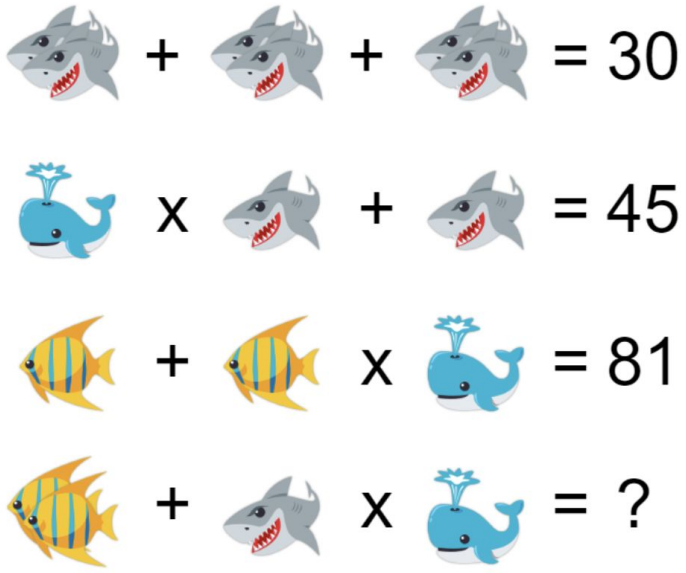
Solve each of the multiplication problems below. For each:

- Divide the dimensions of each square so that you can represent each fraction as a dimension of a rectangle.
- Draw and label the dimensions and area, and write the answer.
- Write the problem and answer in words.

ex $\frac{2}{3} \times \frac{4}{8} = \frac{8}{24} = \frac{1}{3}$		Two-thirds of four-eighths is eight twenty-fourths, or $\frac{2}{3}$.
a $\frac{2}{4} \times \frac{3}{5} =$		
b $\frac{2}{3} \times \frac{4}{6} =$		
c $\frac{3}{4} \times \frac{5}{10} =$		

Puzzle (Source: https://www.solvemoji.com/)

What is the value of the last row?



Fraction Multiplication Models (Source: mathlearningcenter.org)

Use the grids to model and solve each combination. Be sure to label your sketch and write the answer for each problem.