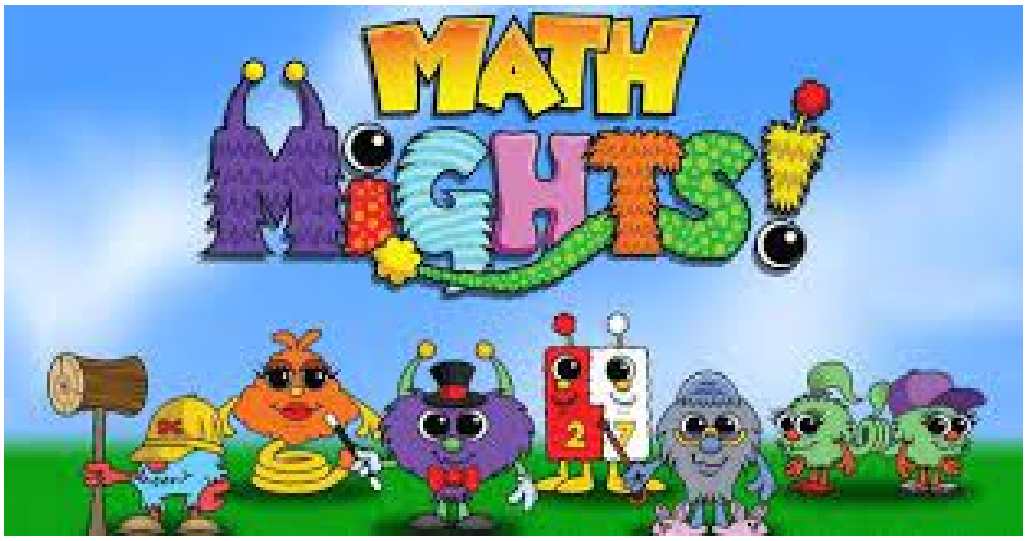
Full Math Mights Packet
3rd Grade



Multiplication Tetris

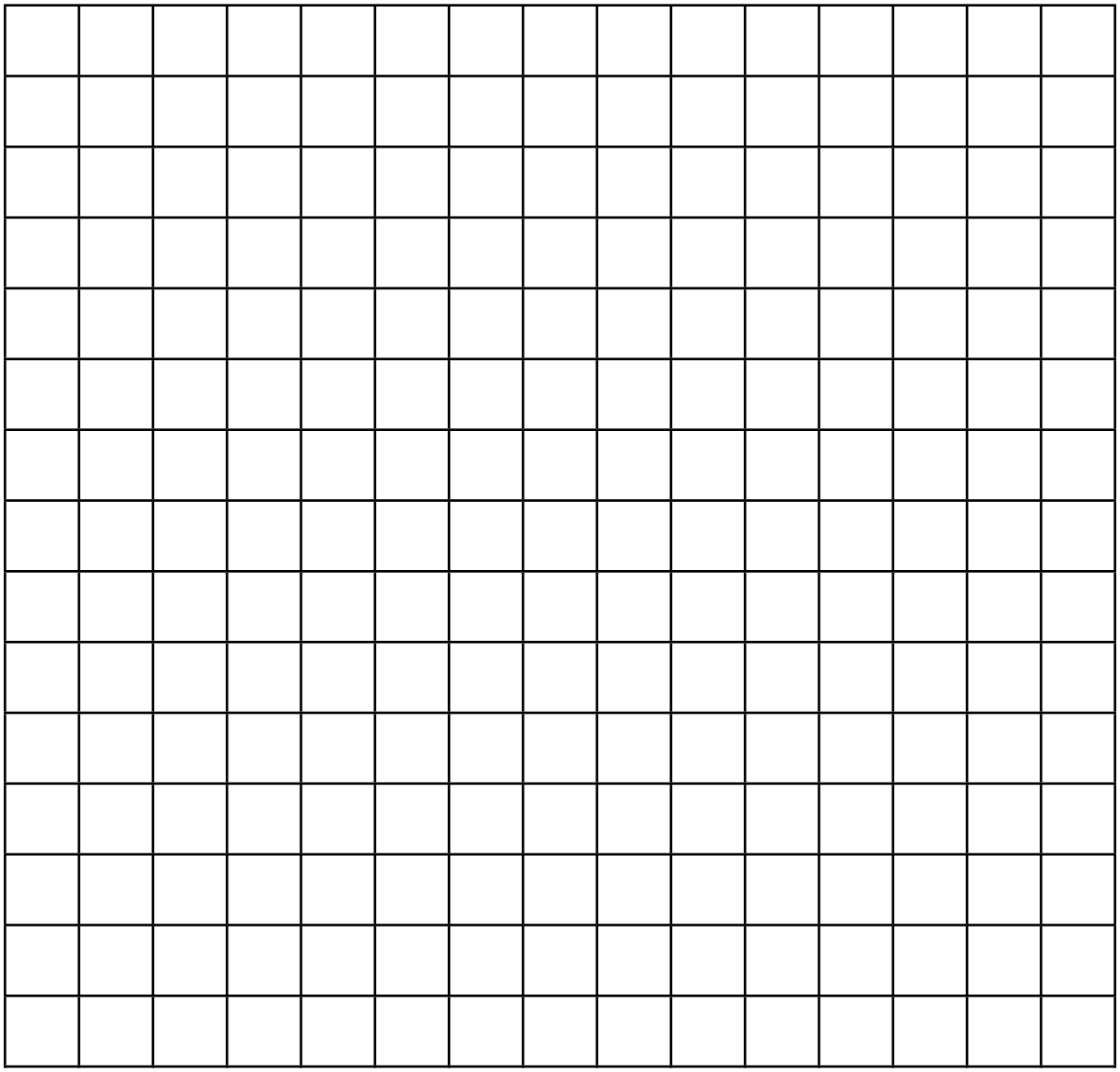
Directions:

Have students play in groups of 2 or 3. Each group needs two dice and each player needs a blank grid that is 15 units by 15 units.

On each player's turn she rolls two dice. The numbers of the dice become the height and width of a rectangle that she will draw onto her grid paper. If a player rolls a 2 and a 5, she decides if the rectangle she draws on the grid will be 2 x 5 or 5 x 2. After the rectangle is drawn, the player writes the factors she used inside the rectangle on the grid.

Each player stops playing as soon as she can no longer draw a rectangle that matches the dice rolled. Rectangles must not overlap and cannot be broken up into smaller rectangles.

The winner of the game is the person who ends up with the fewest unused unit spaces.



Division BUMP

2 Player Division Game

Materials:

☐ 1 Division BUMP Game Board (choose from ÷2, ÷3, ÷4, ÷5, ÷6, ÷7, ÷8, ÷9, ÷10)

☐ 10 chips or clear counters of one color for each player (Example: 10 red & 10 yellow)

☐ Die/Dice - Choose ONE option:

- ☐ 1 ten-sided die (use for facts 1-10). Use ONLY the bold circles on the game board for play.

OR

- ☐ 2 six-sided dice (use for facts 1-12). Use all circles on the game board for play.

Rules:

Objective: The first player to get rid of all 10 counters wins!

Basic Rules:

☐ Roll dice. Place a clear counter on the expression with the matching quotient.
☐ If the number is already covered by another player's counter, BUMP it!
☐ If the number is already covered by YOUR counter, put an additional counter on top to "crown" it and that number becomes closed and un-bump-able!
☐ If a player rolls doubles he gets to roll again.
☐ If all possible circles (expressions) are closed, the player loses a turn.

Variations:

☐ **Level 1:** Put your counter on the circle containing the expression that matches the quotient on your dice.

☐ **Level 2:** Put your counter on the circle containing the expression that matches the quotient, or choose two other expressions that total that quotient and cover each with a counter.

☐ **Level 3: BUMP Unlimited.** Put your counter on the circle containing expression that matches the quotient, or determine a combinations of unlimited numbers that total the quotient and cover each with a counter.

BUMP ÷5

60÷5

55÷5

5÷5

10÷5

20÷5

15÷5

25÷5

35÷5

50÷5

40÷5

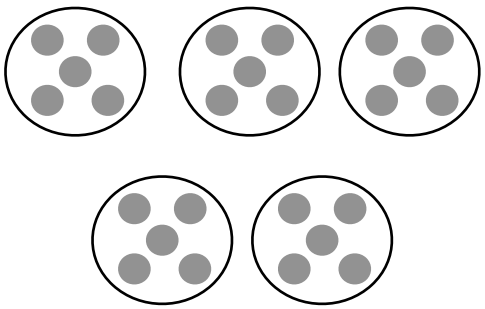
45÷5

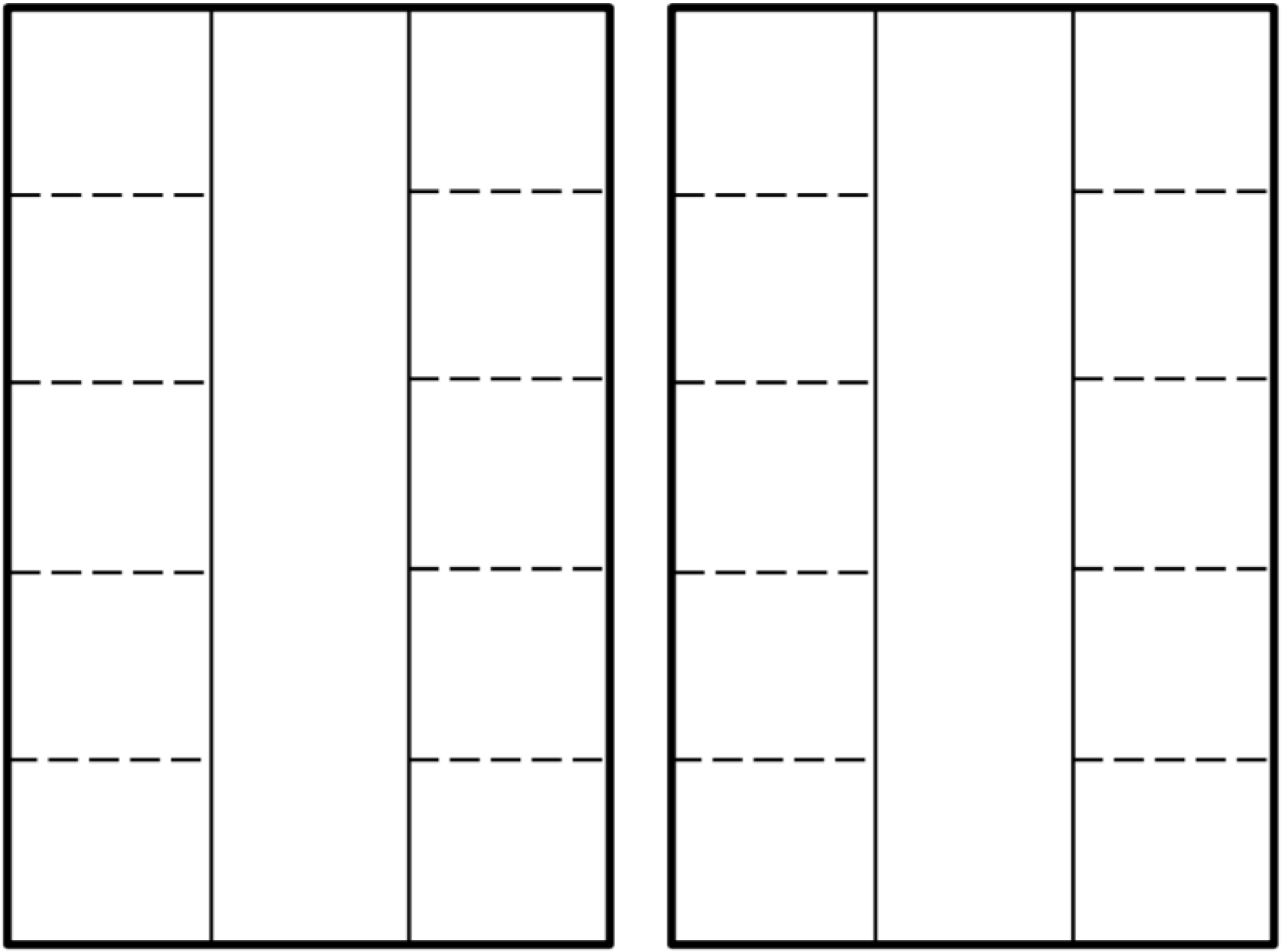
30÷5

Roll Doubles and get another turn!

Relating Multiplication & Division

Directions: Complete each row. Explain your reasoning.

Situation	Drawing or Diagram	Multiplication Equation	Division Equation
Jeffrey has 18 stickers in an album. Each page in the album holds 3 stickers.			18 ÷ 3 = ____
Five boxes contain a total of 25 granola bars. Each box holds the same number of granola bars.			
Susie baked 6 cookies. She put the cookies into 2 rows. Each row has the same number of cookies.		2 x ? = 6	
Mila has 20 colored pencils. Each box holds 4 colored pencils.			20 ÷ 4 = ___



Directions: Solve each problem by decomposing the teen number to multiply. Show your answer with a drawing and how you solved.

3 x 16 =

4 x 14 =

2 x 15 =

5 x 13 =

Name: _____

Directions: Solve each problem by decomposing the teen number and putting into the area model to solve. Show how you solved.

$14 \times 6 =$

$13 \times 4 =$

$7 \times 12 =$

$15 \times 3 =$

My Step-by-Step
VISUAL MODELS
for Word Problem Checklist

Steps	Directions	✓
1	Read entire problem put in "chunks" (|)	
2	Rewrite the question in sentence form with a blank space for the answer	
3	Determine who and/or what is involved in the problem	
4	Draw the unit bar(s)	
5	Go back to the "chunks" (|) and check (✓) when each part is added into the adjusted unit bars, put in question mark	
6	Correctly compute and solve the problem	
7	Write the answer in the sentence, and make sure the answer make sense	

Name _____

Part Whole Division PWD

Kegan collected 35 apples at the apple orchard. He wanted to put them into 5 bags. How many apples would be in each bag?

Sentence Form:

_____

_____

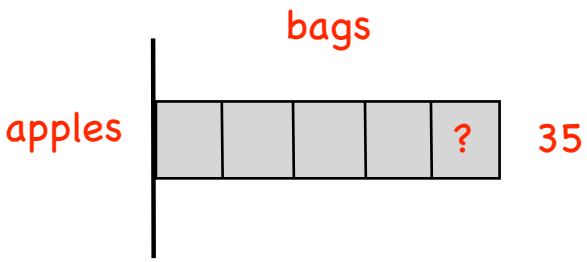
Visual Model	Computation

Kegan collected 35 apples at the apple orchard. He wanted to put them into 5 bags. How many apples would be in each bag?

Sentence Form:

Kegan has _____ apples in each bag.

Visual Model



Computation

strategies may vary

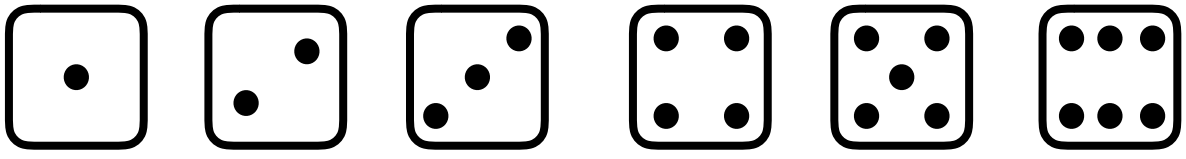
4 in a Row: Multiples of 10

Materials: two crayons (one color for player 1 and another color for player 2) and a die

Directions:

1. Player 1 rolls the die. Find the column with the matching number shown on the die. Start at the bottom of that column and if player 1 correctly answers the first multiplication problem in that column he/she can color in that box.
2. If the problem was answered incorrectly he/she cannot color in that box.
3. Player 2: Repeat step 1-2. If a box is already colored in the column you rolled move to the box above it.
4. Continue playing until one player has 4 in a row!

9 x 80 =	8 x 70 =	4 x 40 =	20 x 3 =	50 x 8 =	10 x 5 =
30 x 2 =	60 x 5 =	20 x 3 =	9 x 40 =	2 x 60 =	30 x 4 =
4 x 40 =	10 x 3 =	9 x 20 =	90 x 7 =	7 x 80 =	20 x 6 =
30 x 2 =	20 x 4 =	90 x 7 =	60 x 2 =	9 x 10 =	80 x 2 =
3 x 60 =	4 x 90 =	60 x 2 =	3 x 30 =	30 x 7 =	60 x 8 =
5 x 40 =	60 x 4 =	4 x 70 =	60 x 5 =	10 x 8 =	20 x 5 =
50 x 6 =	3 x 50 =	5 x 50 =	3 x 70 =	50 x 7 =	3 x 40 =



Close To 100

Materials: 2 sets of number cards 0-9 (cut out)

Directions:

1. Work with a partner. Cut the bottom portion of this sheet in half so each player can record their answers. Place the number cards face down. Each player draws 4 cards.
2. Each player chooses 2 cards to complete the expression to make a value as close to 100 as possible. Write the 2-digits and the product.
3. The player closest to 100 wins.

Level 1: Player 1		
Round 1	___ x 1___ =	_____
Round 2	___ x 1___ =	_____
Round 3	___ x 1___ =	_____
Round 4	___ x 1___ =	_____
Round 5	___ x 1___ =	_____

Level 1: Player 2		
Round 1	___ x 1___ =	_____
Round 2	___ x 1___ =	_____
Round 3	___ x 1___ =	_____
Round 4	___ x 1___ =	_____
Round 5	___ x 1___ =	_____

Level 2: Player 1		
Round 1	___ x 2___ =	_____
Round 2	___ x 2___ =	_____
Round 3	___ x 2___ =	_____
Round 4	___ x 2___ =	_____
Round 5	___ x 2___ =	_____

Level 2: Player 2		
Round 1	___ x 2___ =	_____
Round 2	___ x 2___ =	_____
Round 3	___ x 2___ =	_____
Round 4	___ x 2___ =	_____
Round 5	___ x 2___ =	_____

0	1	2
3	4	5
6	7	8
9		

0	1	2
3	4	5
6	7	8
9		

Representing Division

Directions: Complete each row. Draw out base ten blocks to represent the problem then solve.

Problem	Base Ten Drawing	Answer
48 ÷ 4		
66 ÷ 6		
36 ÷ 3		
70 ÷ 5		

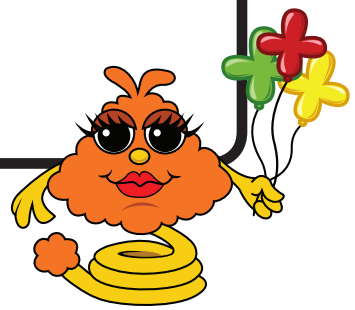
Directions: Use the multiplying-up strategy to divide.

80 ÷ 5 =

64 ÷ 4 =

68 ÷ 4 =

56 ÷ 14 =



Estimate & Compare Quotients

Materials: expression cards (cut out), recording sheet (below)

Directions:

1. Shuffle the cards and place them face down.
2. Player 1 draws two cards. Come up with an estimate for each expression shown on the cards and determine which of the two has the greatest value. Record your answers on the sheet below.
3. Player 2 gives feedback. If correct, player 1 keeps the cards, otherwise the player must return the cards.
4. Take turns and continue steps 2–3 until no cards are left.
5. The player with the most cards wins

Player 1

Card 1 Estimate	Card 2 Estimate	Which expression is greater?

Player 2

Card 1 Estimate	Card 2 Estimate	Which expression is greater?

$92 \div 4$	$52 \div 13$
$100 \div 25$	$100 \div 20$
$66 \div 22$	$84 \div 7$
$65 \div 5$	$84 \div 12$

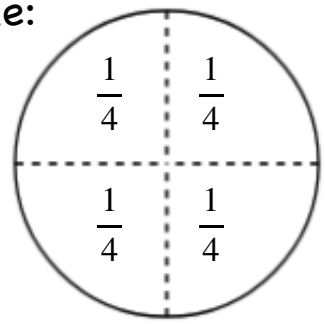
$72 \div 18$	$45 \div 15$
$63 \div 3$	$88 \div 22$
$72 \div 3$	$69 \div 3$
$96 \div 24$	$78 \div 6$

$68 \div 4$	$90 \div 6$
$57 \div 19$	$84 \div 4$
$80 \div 8$	$96 \div 12$
$60 \div 15$	$91 \div 7$

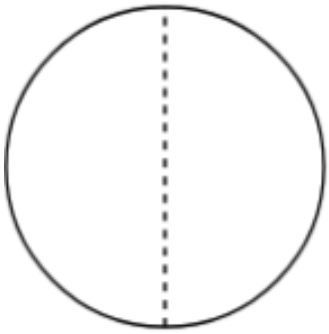
Reading and Writing Fractions

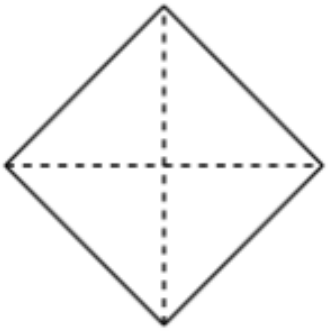
Directions: Label each part of the pictures and practice reading the fraction.

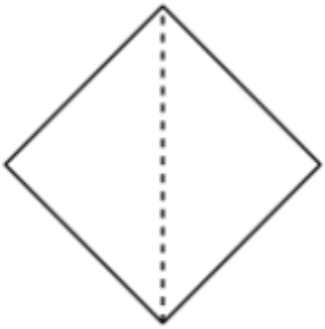
Example:

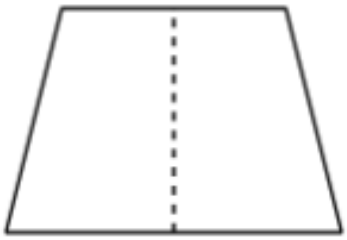


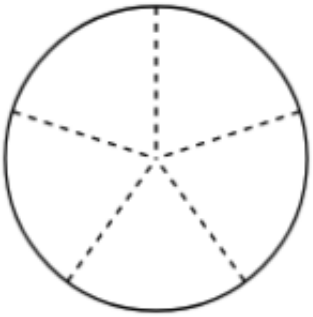
Practice reading: one fourth

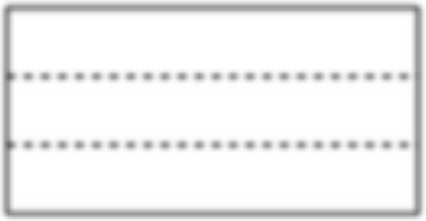


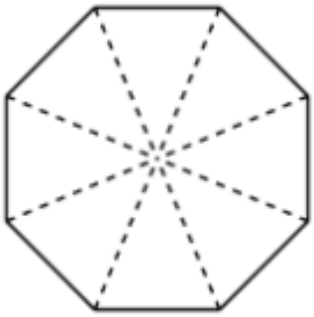


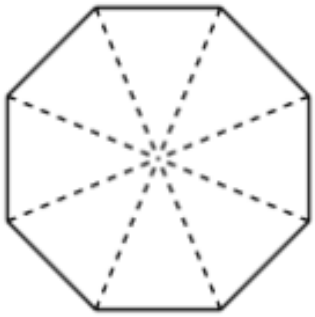


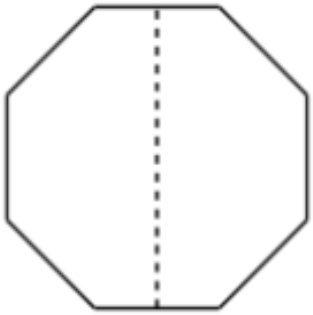


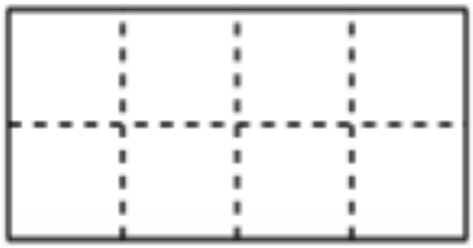


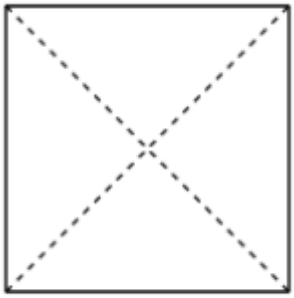


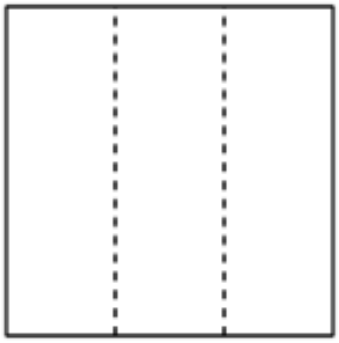


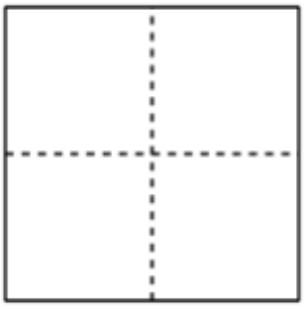


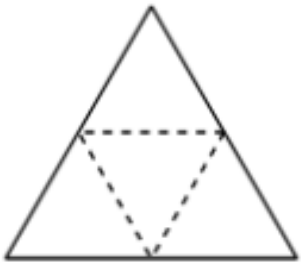












Fraction Strips

Materials:

- fraction strip template
- scissors
- crayons or markers
- envelopes

Directions:

1. Label the longest strip as one whole, $\frac{1}{1}$. Color the strip red.
2. Label the parts of each strip with the correct unit fraction. Color them the following colors: $\frac{1}{2}$ yellow, $\frac{1}{3}$ green, $\frac{1}{4}$ blue, $\frac{1}{6}$ orange, $\frac{1}{8}$ white.
3. Cut out and order the fraction strips from the largest to the smallest sized pieces. What do you notice about the numerators? What do you notice about the denominators? Record your observations below.
4. Write your name on the back of each fraction strip and store them in an envelope.

What do you notice about the numerators?:_____

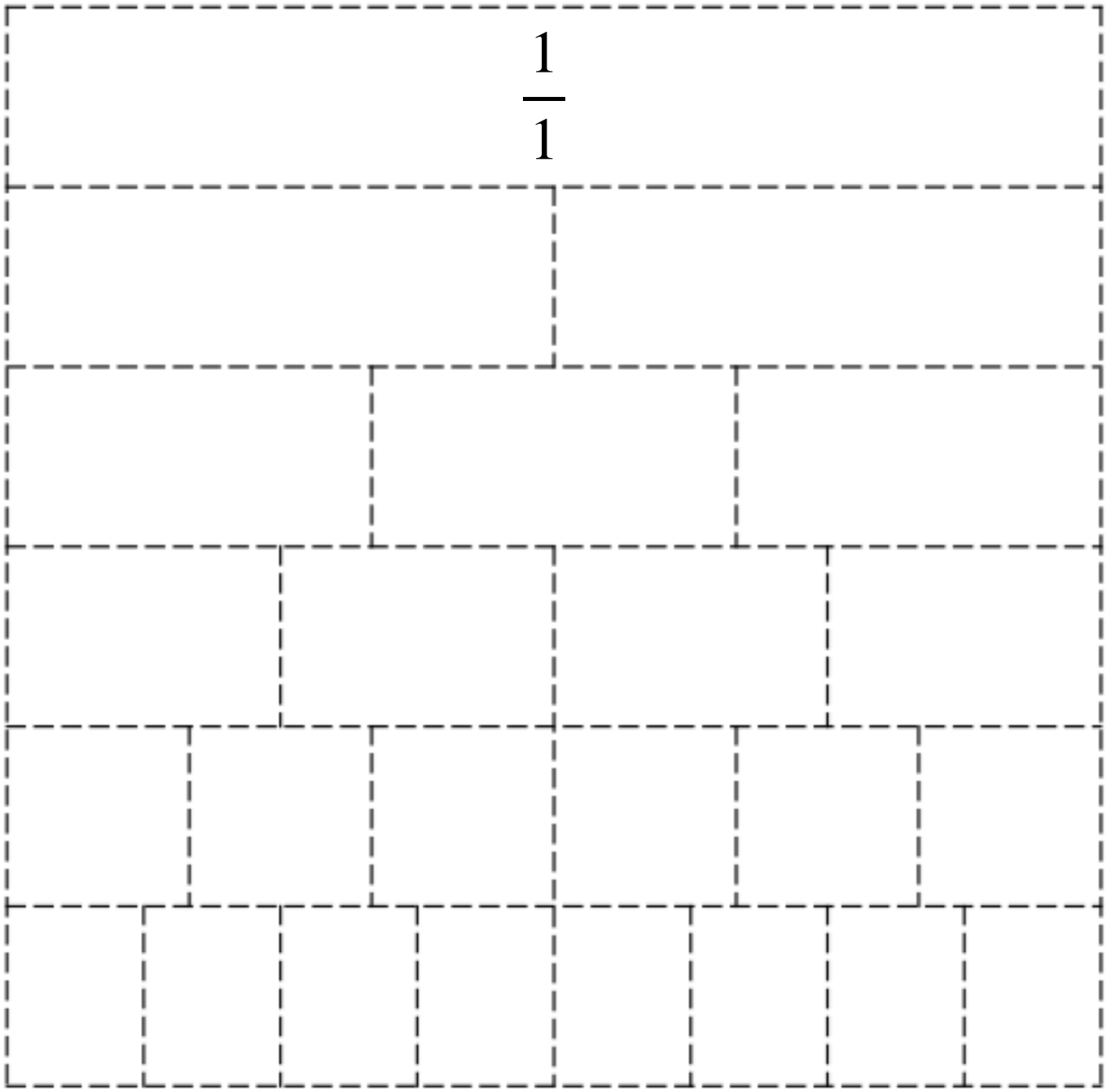
_____

_____

What do you notice about the denominators?:_____

_____

_____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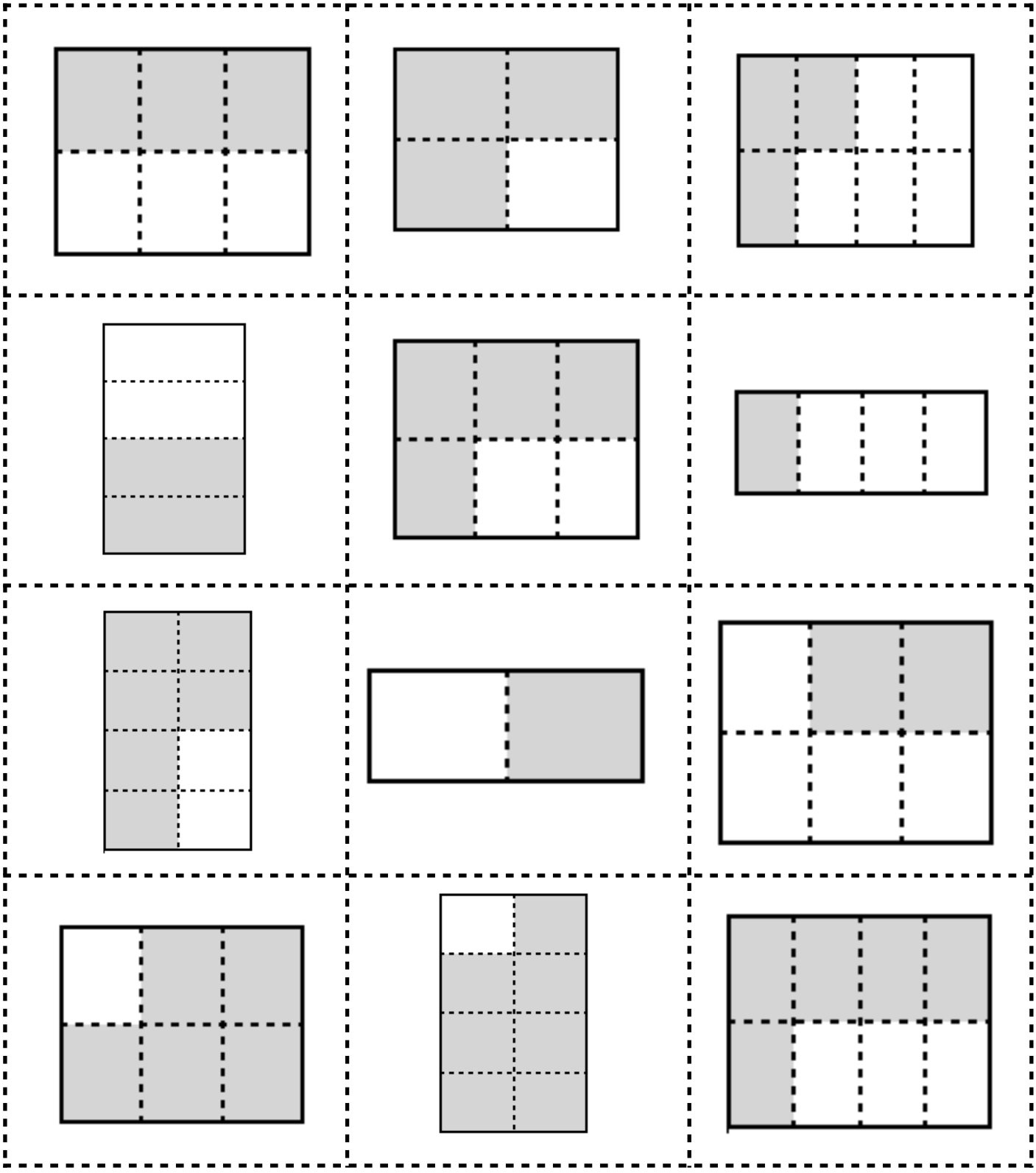
Fraction Match Up

Directions: Cut out all the cards. Scatter the cards facedown in two piles, one with the fraction cards and one with the shape cards. With 2 players take turns flipping over 2 cards, one from each pile, trying to make a match. If you don't make a match flip both cards over and it's the other players turn. The player with the most pair of matches wins!

$\frac{5}{6}$	$\frac{1}{4}$	$\frac{7}{8}$
$\frac{3}{4}$	$\frac{5}{8}$	$\frac{4}{6}$
$\frac{6}{8}$	$\frac{2}{6}$	$\frac{1}{2}$
$\frac{2}{4}$	$\frac{3}{8}$	$\frac{3}{6}$



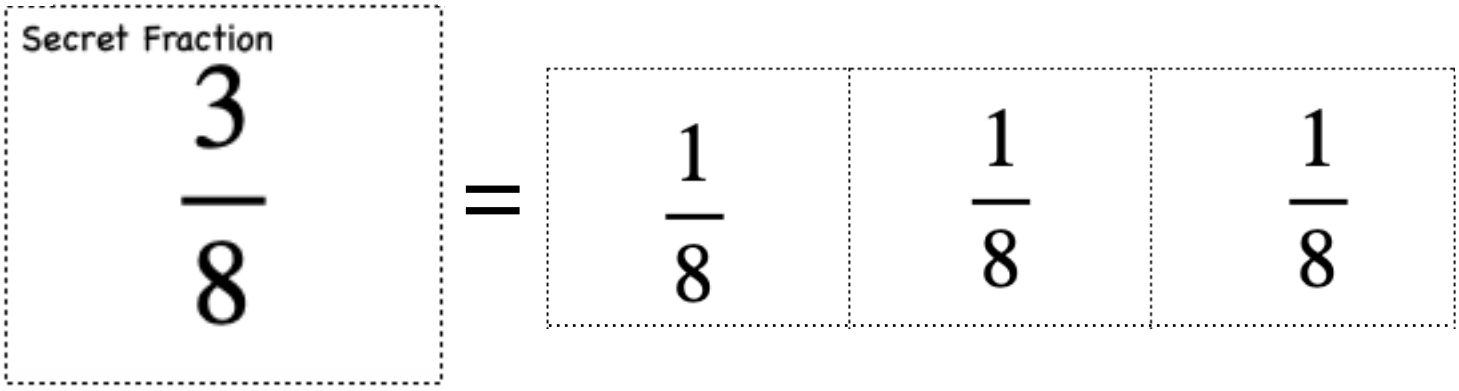
Secret Fractions

Materials:

- SECRET fraction cards cut out
- UNIT fraction cards cut out
- game board for each player

Directions:

1. Place the SECRET fraction cards face down in a pile. Place the UNIT fraction cards place down in a pile.
2. Each player draws 1 SECRET fraction card. This will be the fraction you will try to build with the UNIT fraction cards.
3. On your turn draw a UNIT fraction card or trade in your SECRET fraction card for a new one.
4. When you have enough unit fractions to make your secret fraction fill in your secret fraction on the game board.

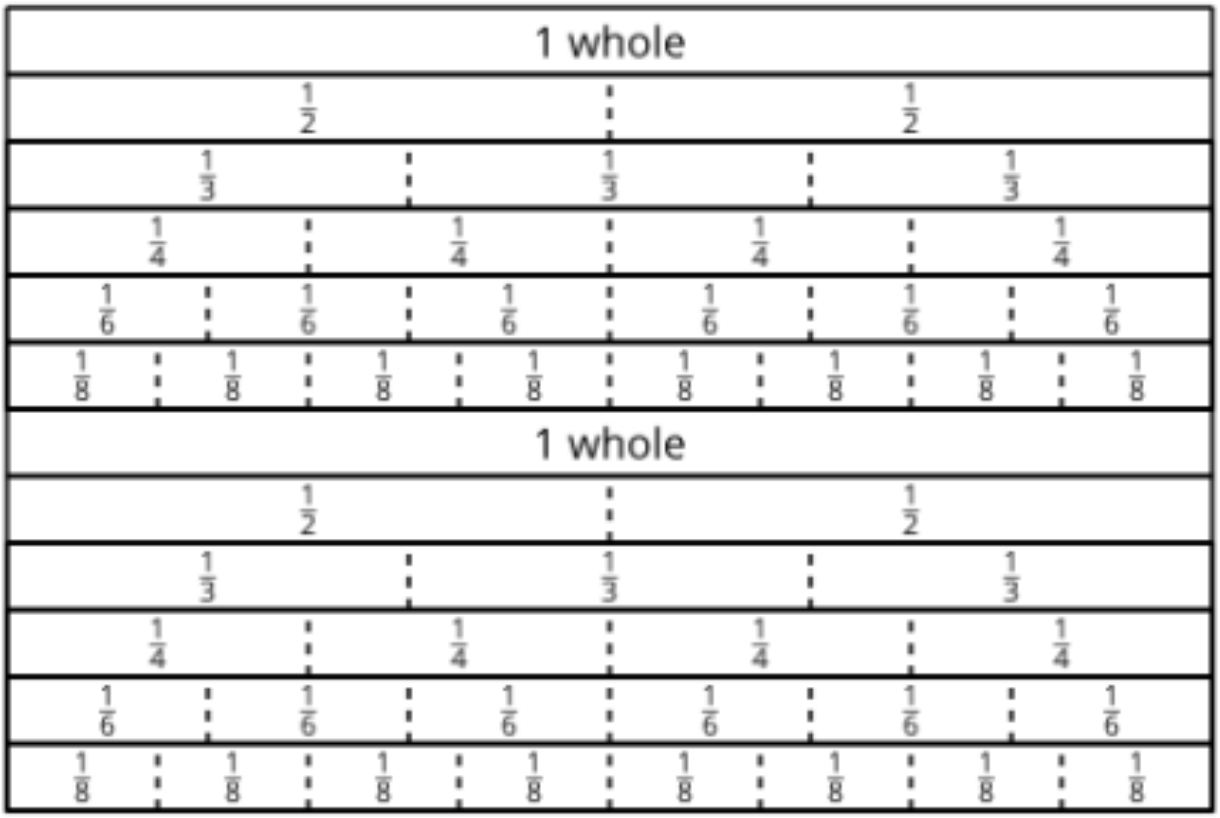


$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{3}$	$\frac{1}{3}$
$\frac{1}{3}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$
$\frac{1}{4}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$
$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{8}$
$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$
$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	

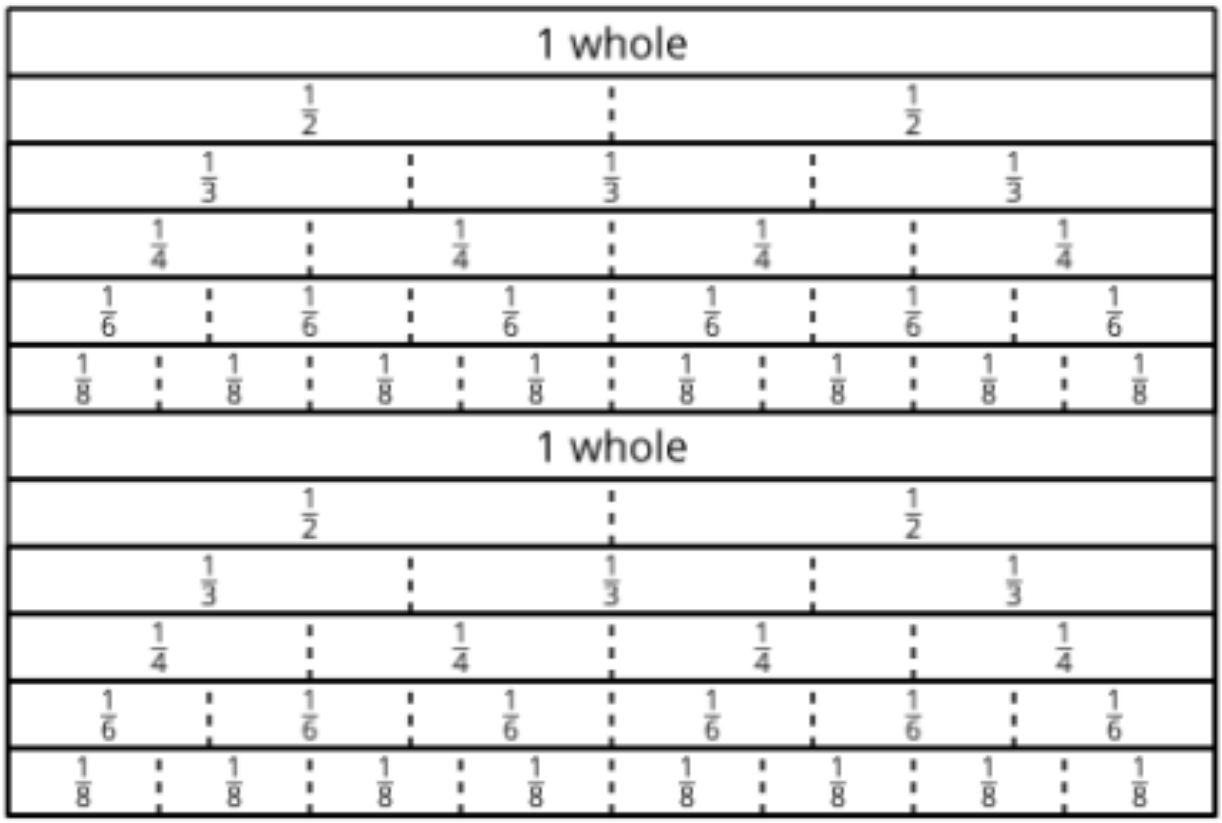
$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{3}$	$\frac{1}{3}$
$\frac{1}{3}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$
$\frac{1}{4}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$
$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{8}$
$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$
$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	

Secret Fraction $\frac{2}{2}$	Secret Fraction $\frac{2}{3}$	Secret Fraction $\frac{3}{3}$	Secret Fraction $\frac{2}{4}$
Secret Fraction $\frac{3}{4}$	Secret Fraction $\frac{4}{4}$	Secret Fraction $\frac{2}{6}$	Secret Fraction $\frac{4}{6}$
Secret Fraction $\frac{5}{6}$	Secret Fraction $\frac{2}{8}$	Secret Fraction $\frac{3}{8}$	Secret Fraction $\frac{5}{8}$

Player 1 Gameboard



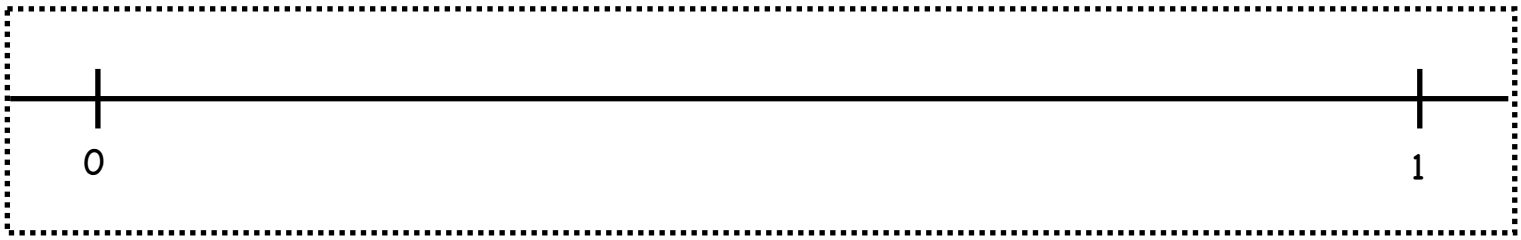
Player 2 Gameboard

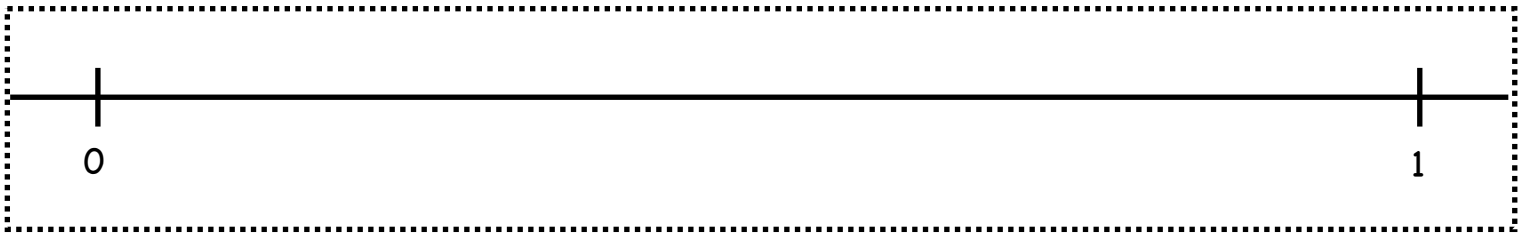


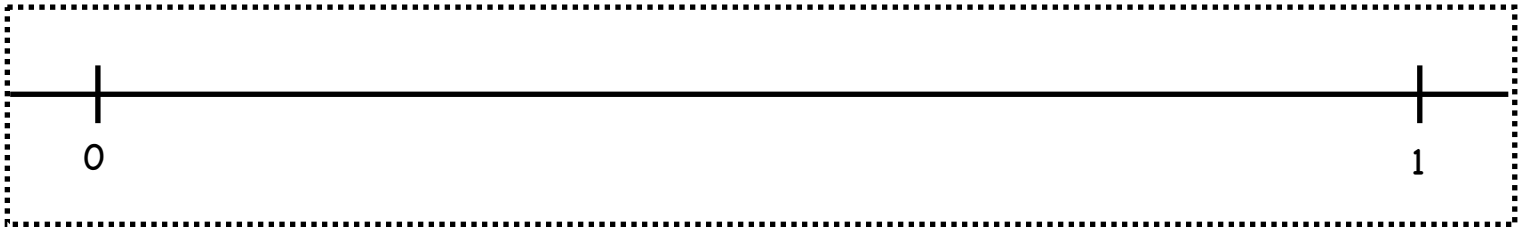
Cut, Fold, Label

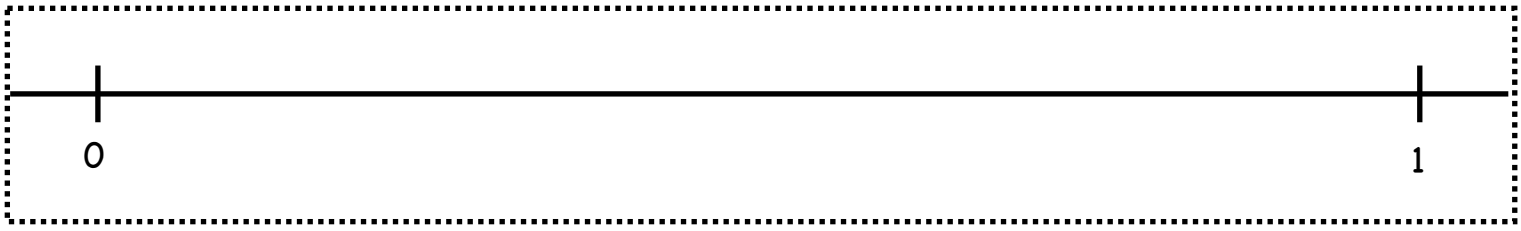
Directions:

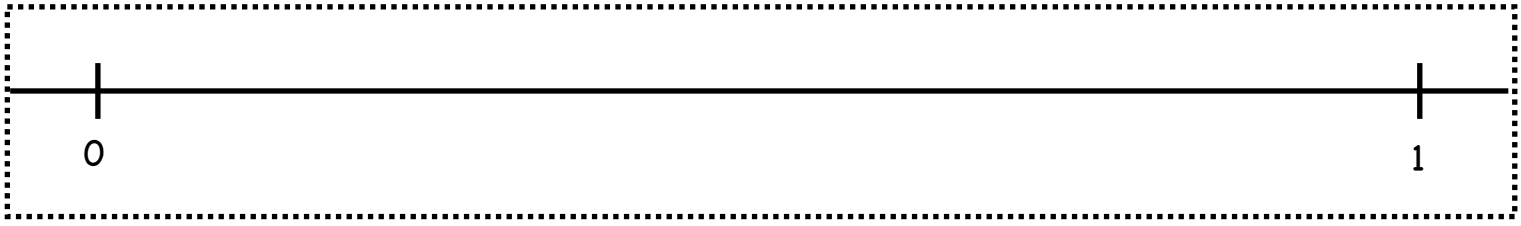
1. Cut out all 5 number lines.
2. Fold the first number line into halves. Draw tick marks to show the halves. Label the number $\frac{1}{2}$.
3. Fold the next number line into thirds. Draw tick marks to show the thirds. Label the number $\frac{1}{3}$.
4. Continue with fourths, sixths, and eighths.







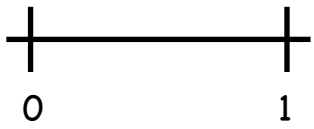




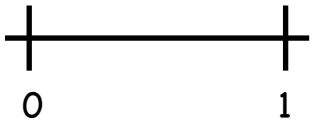
Locate The Fraction

Directions: Partition each number line. Locate and label each fraction.

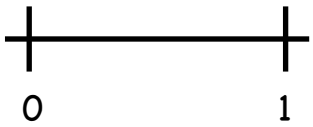
1. $\frac{1}{4}$



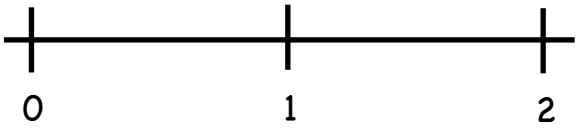
2. $\frac{1}{8}$



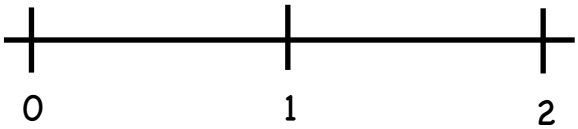
3. $\frac{1}{3}$



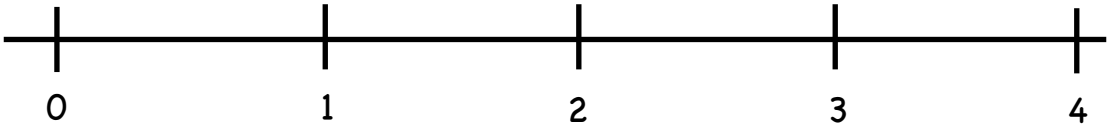
4. $\frac{1}{4}$



5. $\frac{1}{6}$

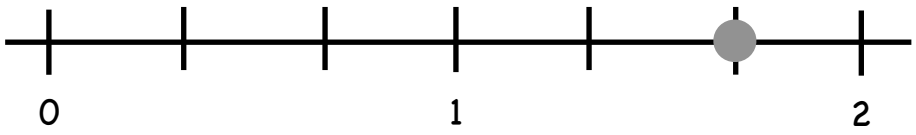


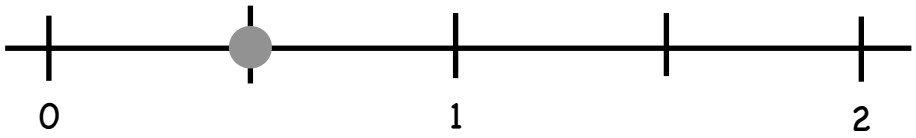
6. $\frac{1}{8}$

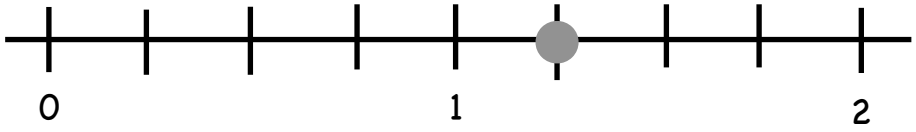


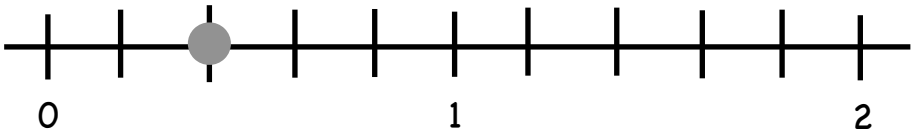
Guess The Fraction

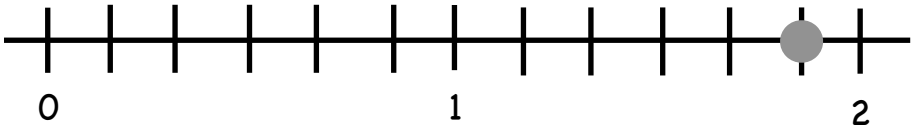
Directions: Guess which fraction is displayed with a dot on the number line. Label the fraction.

1. 

2. 

3. 

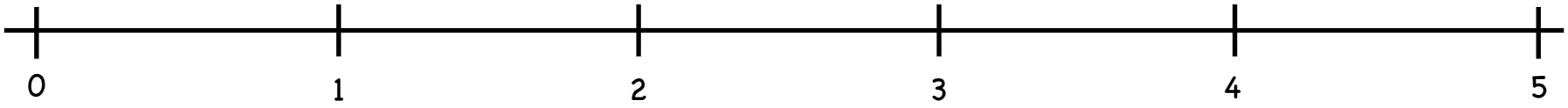
4. 

5. 

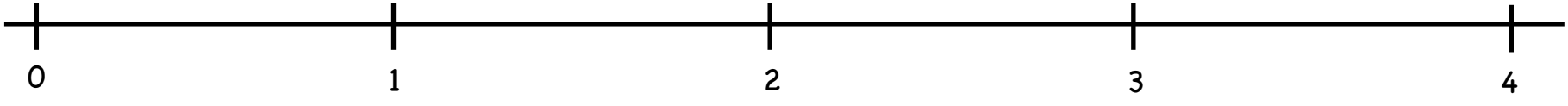
Find The Fraction

Directions: Using the fractions from below locate where each fraction belongs on the number line and make tick marks to show where it belongs. Label the tick marks with the fraction. Cross off the fractions as you use them.

A.



B.



Number Line A				
$\frac{1}{2}$	$\frac{2}{2}$	$\frac{3}{2}$	$\frac{4}{2}$	$\frac{5}{2}$
$\frac{6}{2}$	$\frac{7}{2}$	$\frac{8}{2}$	$\frac{9}{2}$	$\frac{10}{2}$

Number Line B					
$\frac{1}{4}$	$\frac{2}{4}$	$\frac{3}{4}$	$\frac{4}{4}$	$\frac{5}{4}$	$\frac{6}{4}$
$\frac{7}{4}$	$\frac{8}{4}$	$\frac{9}{4}$	$\frac{10}{4}$	$\frac{11}{4}$	$\frac{12}{4}$

Equivalent Fraction Roll

Materials: 6 die

Directions:

1. Player 1 rolls 2 die and makes a fraction with the 2 amounts shown on the die. If you roll any fives, they count as a wild card and can be any number you'd like.
2. Player 2 rolls 6 die and tries to create a fraction that is equivalent to Player 1's fraction. (remember fives are wild)
3. If you cannot, re-roll as many number die as you'd like. You can re-roll your number cubes twice.
4. If you can make equivalent fractions, record your statement and show or explain how you know the fractions are equivalent.
5. You get 1 point for each pair of equivalent fractions you write.
6. Repeat steps 1-5 starting with Player 2. Play 8 rounds.

	Equivalent Fractions	If an equivalent fraction was created, circle the player who gets the point.
Round 1	$\frac{\square}{\square} = \frac{\square}{\square}$	Player 1 or Player 2
Round 2	$\frac{\square}{\square} = \frac{\square}{\square}$	Player 1 or Player 2
Round 3	$\frac{\square}{\square} = \frac{\square}{\square}$	Player 1 or Player 2
Round 4	$\frac{\square}{\square} = \frac{\square}{\square}$	Player 1 or Player 2

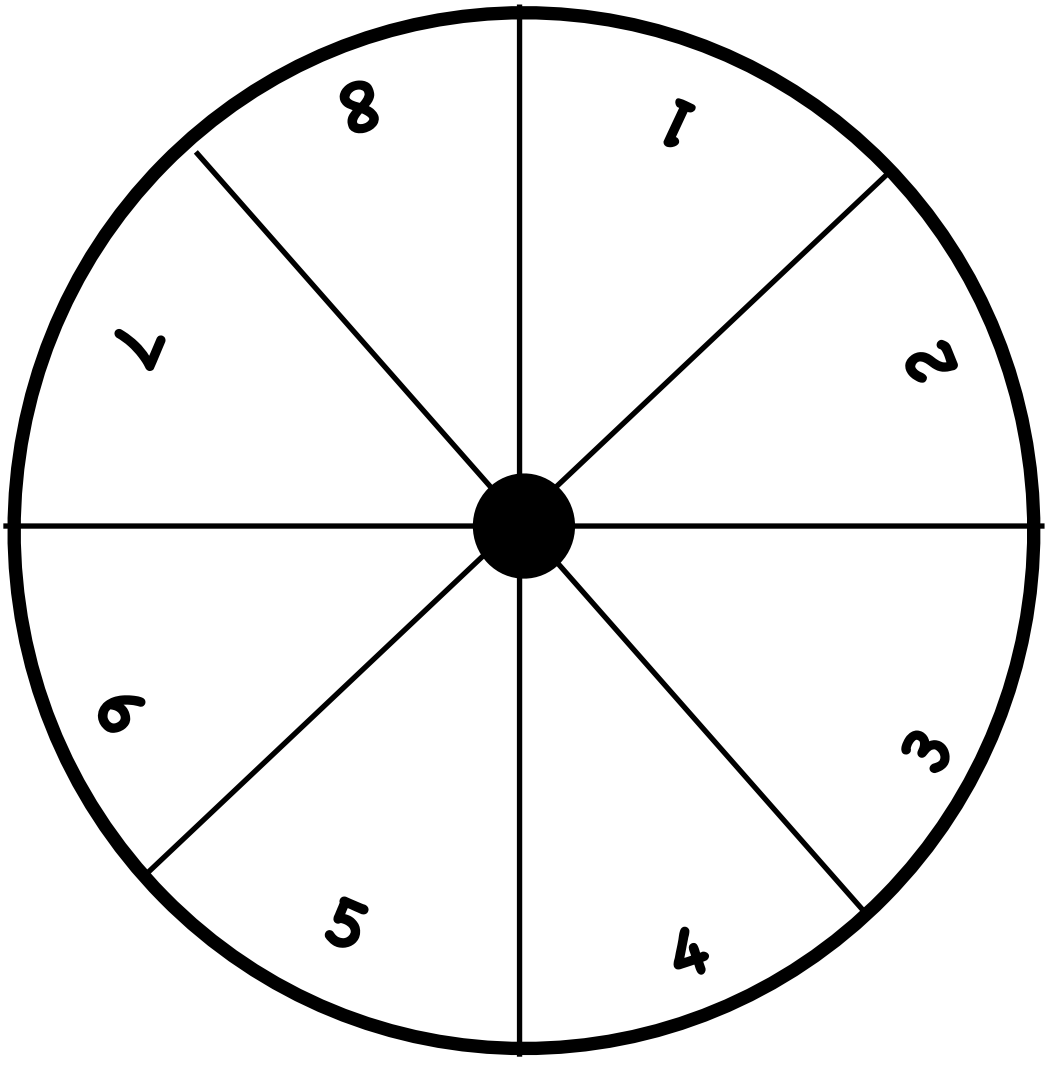
	Equivalent Fractions	If an equivalent fraction was created, circle the player who gets the point.
Round 5	$\frac{\square}{\square} = \frac{\square}{\square}$	Player 1 or Player 2
Round 6	$\frac{\square}{\square} = \frac{\square}{\square}$	Player 1 or Player 2
Round 7	$\frac{\square}{\square} = \frac{\square}{\square}$	Player 1 or Player 2
Round 8	$\frac{\square}{\square} = \frac{\square}{\square}$	Player 1 or Player 2

Same But Different

Materials: fraction strips (cut out), make a spinner with a pencil and paperclip, recording sheets for each player

Directions:

1. Both players choose a denominator: 2, 3, 4, 6, or 8. Then spin for the numerator of your fraction.
2. Use fraction strips to find an equivalent fraction. Draw a diagram on the recording sheet.
3. Write an equivalent fraction statement on the recording sheet.
4. Use the tiles to compare your fraction with your partner's fraction.
5. The player with the greatest fraction earns 1 point. The player with the most points wins.



Player 1

Recording Sheet

	Diagram	Equivalent Statement
Round 1		$\frac{\square}{\square} = \frac{\square}{\square}$
Round 2		$\frac{\square}{\square} = \frac{\square}{\square}$
Round 3		$\frac{\square}{\square} = \frac{\square}{\square}$
Round 4		$\frac{\square}{\square} = \frac{\square}{\square}$
Round 5		$\frac{\square}{\square} = \frac{\square}{\square}$

Player 2

Recording Sheet

	Diagram	Equivalent Statement
Round 1		$\frac{\square}{\square} = \frac{\square}{\square}$
Round 2		$\frac{\square}{\square} = \frac{\square}{\square}$
Round 3		$\frac{\square}{\square} = \frac{\square}{\square}$
Round 4		$\frac{\square}{\square} = \frac{\square}{\square}$
Round 5		$\frac{\square}{\square} = \frac{\square}{\square}$

1 whole

$\frac{1}{2}$	$\frac{1}{2}$

$\frac{1}{3}$	$\frac{1}{3}$	$\frac{1}{3}$

$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$

$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$

$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$

Fractions Take Action

Directions:

1. Cut out and mix up the number cards and place them face down in a pile. `
2. Player 1 draws one card and decides whether that number will be the numerator or denominator for both players. Circle your choice on the recording sheet below. Then both players fill in that number on the recording sheet.
3. Next, each player draws on card to fill in the blank on the recording sheet for their fraction.
4. Compare the fractions. The player with the greater fraction earns 2 points.
5. If the fractions are equivalent, each player earns 1 point.
6. Repeat steps 2-5 but this time it's Player 2's turn to draw the first card. The player with the most points wins!

	Circle One:	Use <, >, or =
		Player 1 ☐ ☐ Player 2
Round 1	like numerators like denominators	☐/☐ — ☐/☐
Round 2	like numerators like denominators	☐/☐ — ☐/☐
Round 3	like numerators like denominators	☐/☐ — ☐/☐
Round 4	like numerators like denominators	☐/☐ — ☐/☐
Round 5	like numerators like denominators	☐/☐ — ☐/☐

1	2	3
4	5	6
7	8	9

1	2	3
4	5	6
7	8	9

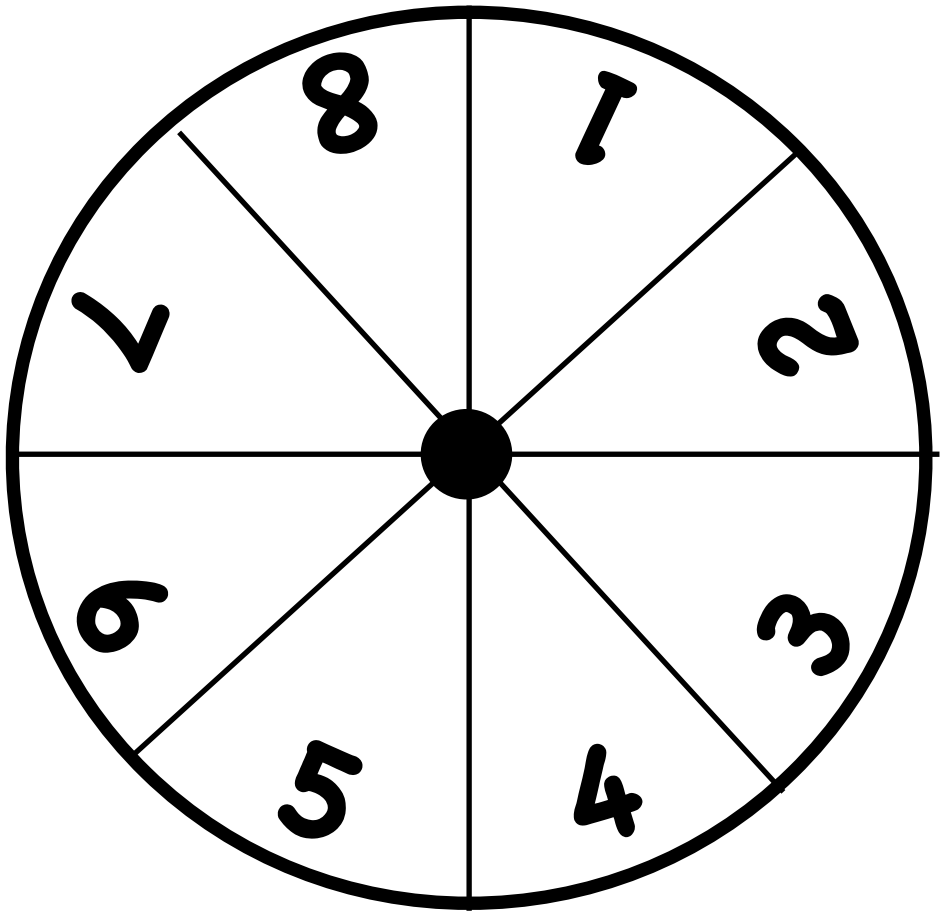
1	2	3
4	5	6
7	8	9

Spin To Win! (same denominator)

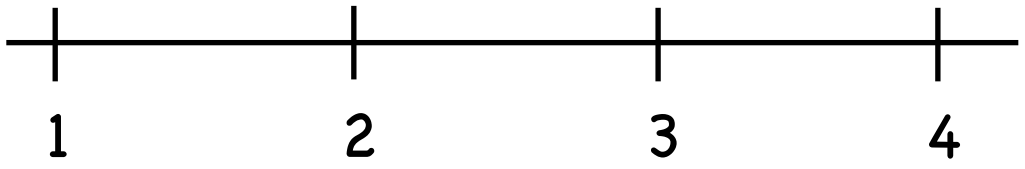
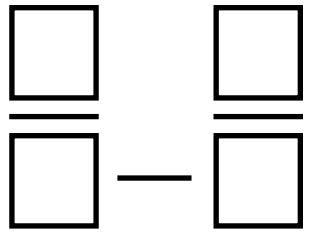
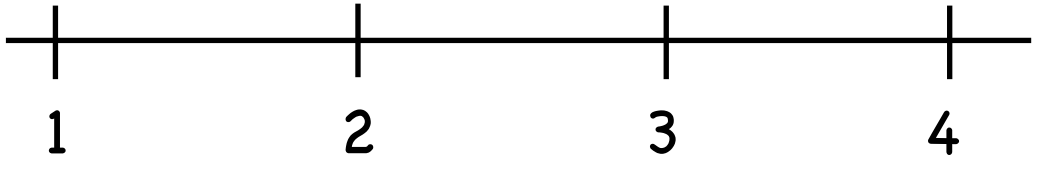
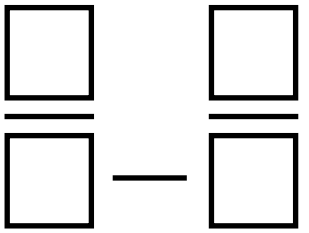
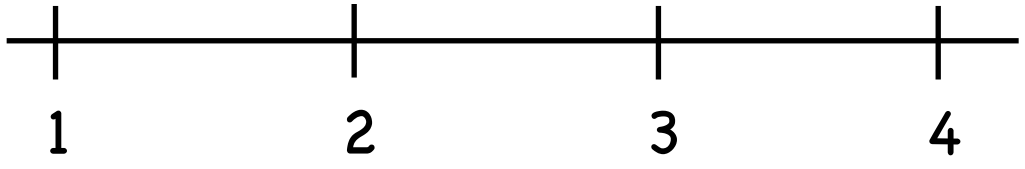
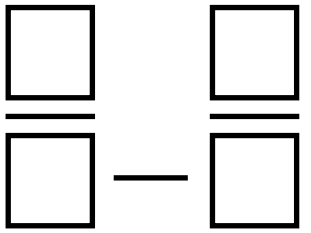
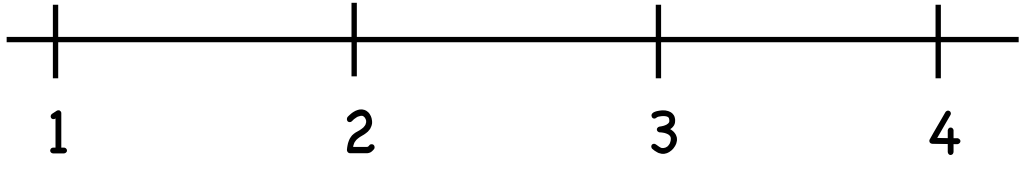
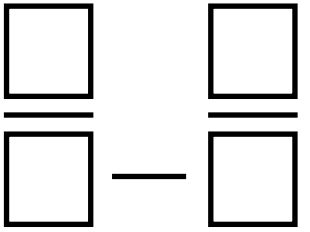
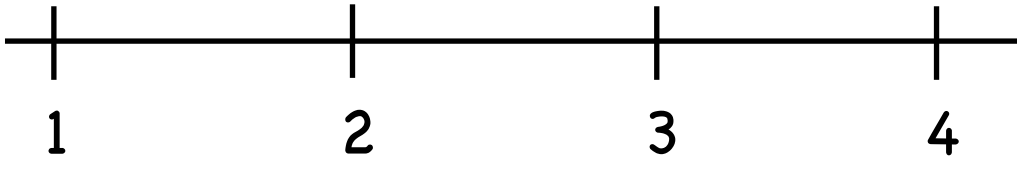
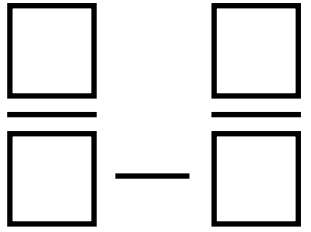
Materials: make a spinner with a pencil and paperclip, 2 different color crayons, recording sheet

Directions:

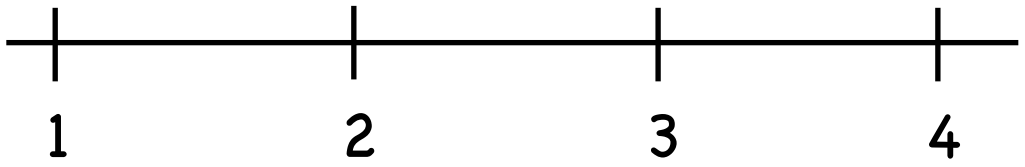
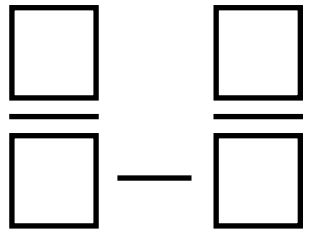
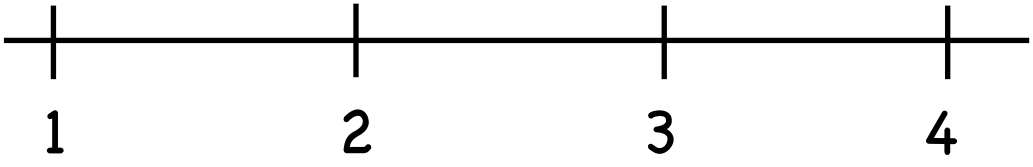
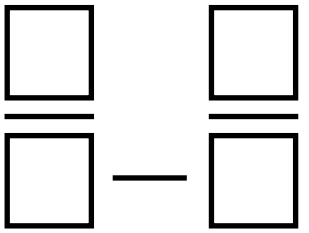
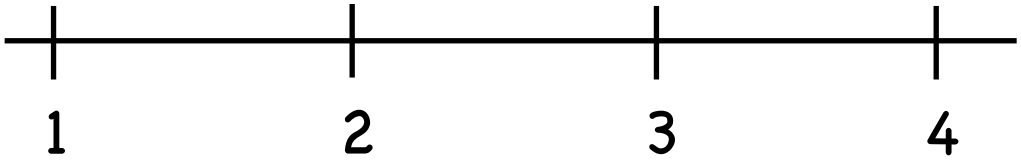
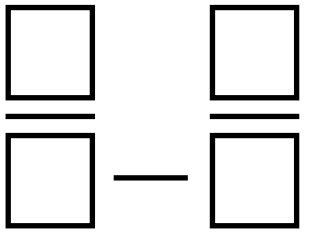
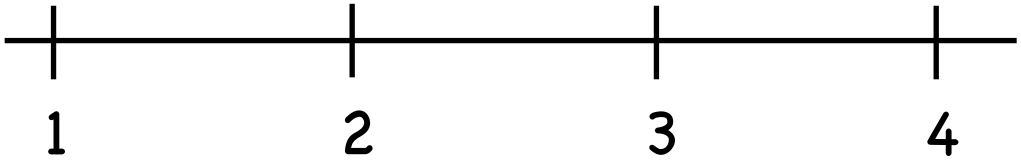
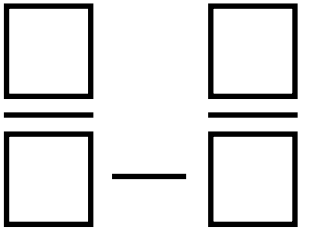
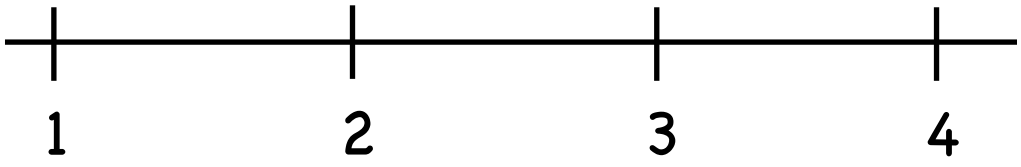
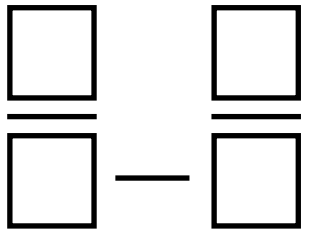
1. Player 1 chooses a denominator for the first round: 2, 3, 4, 6, or 8.
2. Each player spins for the numerator of their fraction.
3. Use the recording sheet. Each player, locate and label your fractions on the same number line.
4. The greatest fraction wins and picks the denominator for the next round.
5. Repeat for 10 rounds. The player who wins the most rounds, wins the game.



Recording Sheet - Version 1

	Locate and label your fraction (each player uses a different color).	Use <, >, or =
Round 1		
Round 2		
Round 3		
Round 4		
Round 5		

Recording Sheet - Version 1

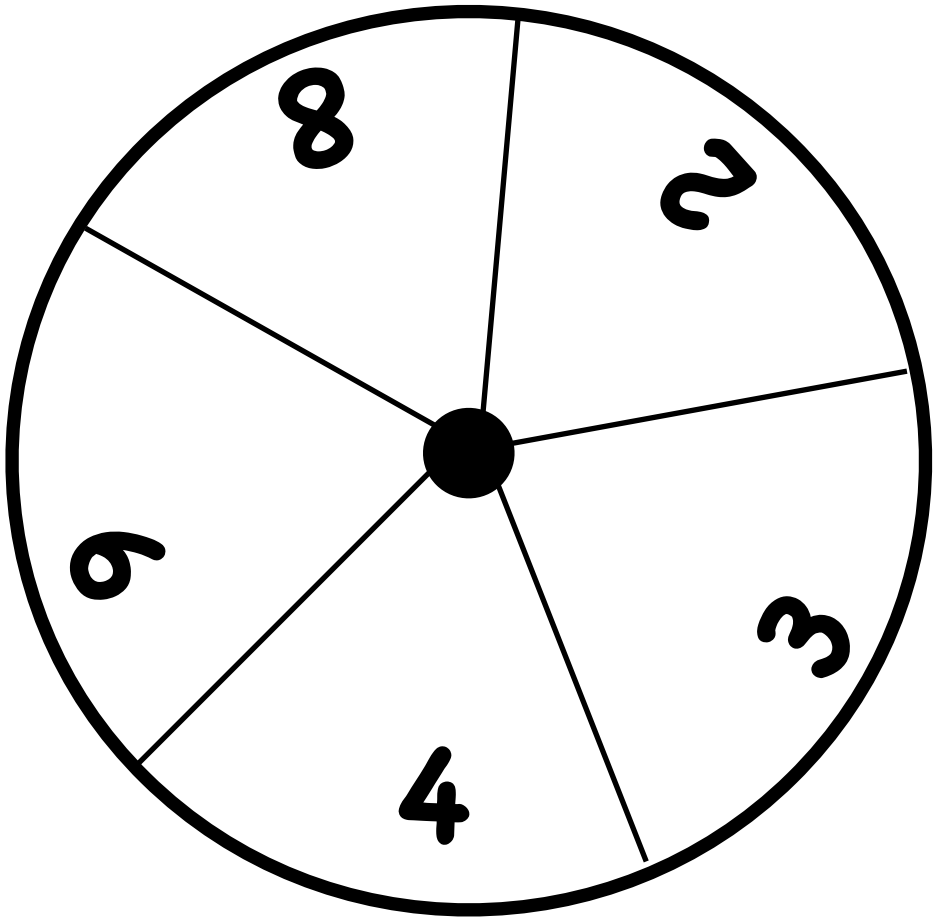
	Locate and label your fraction (each player uses a different color).	Use <, >, or =
Round 6		
Round 7		
Round 8		
Round 9		
Round 10		

Spin To Win! (same numerator)

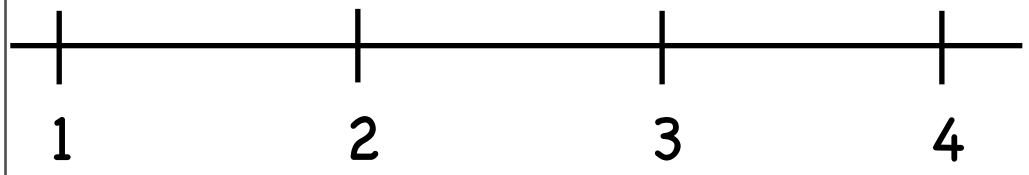
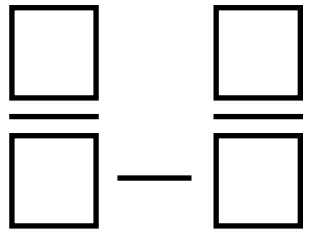
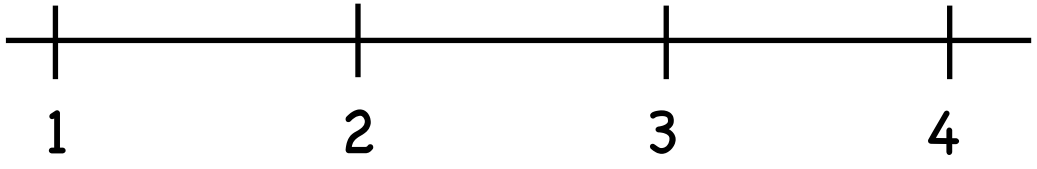
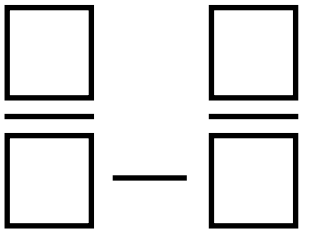
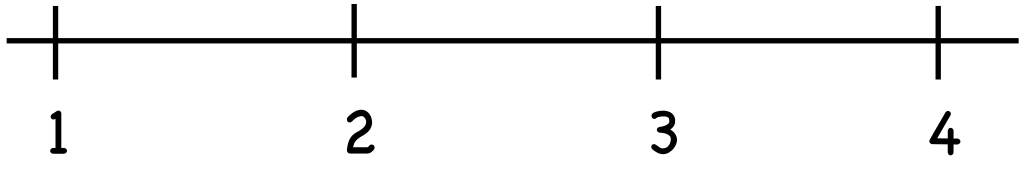
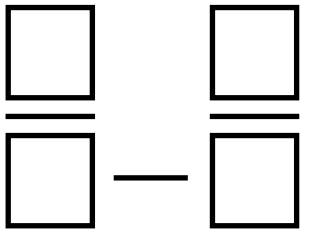
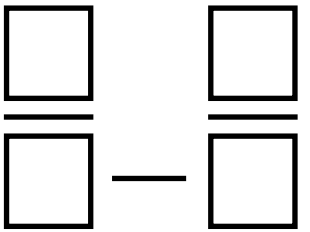
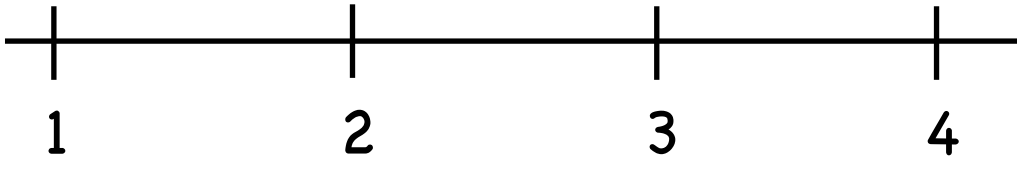
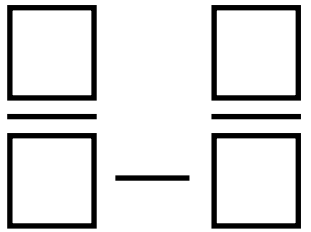
Materials: make a spinner with a pencil and paperclip, 2 different color crayons, recording sheet

Directions:

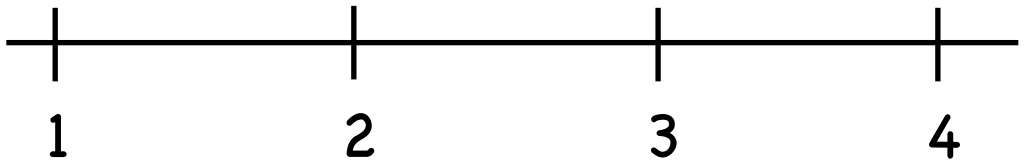
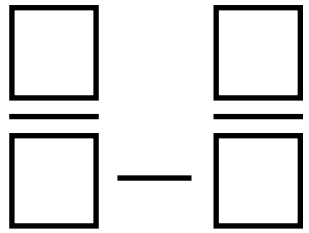
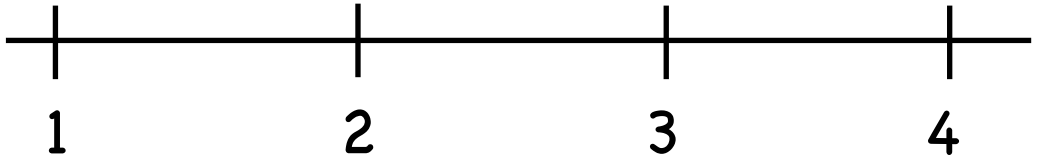
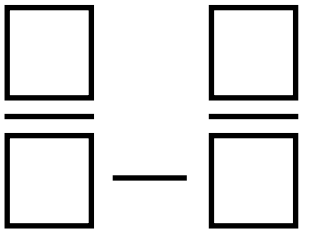
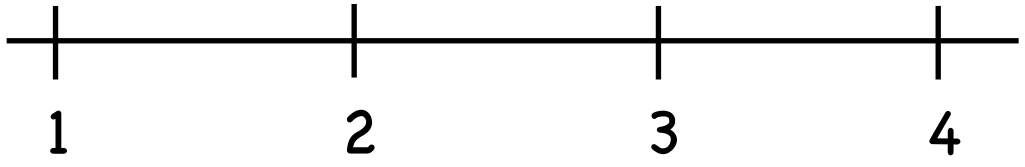
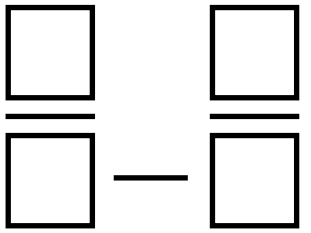
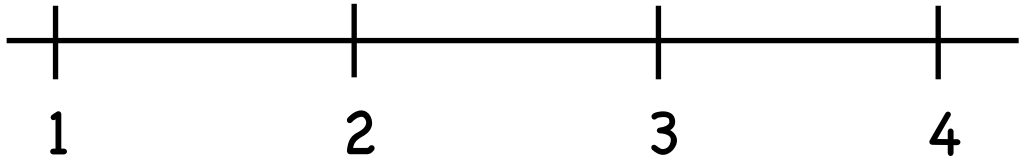
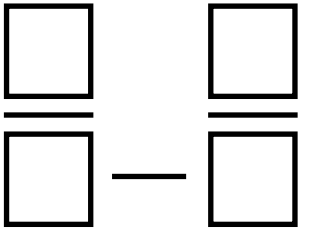
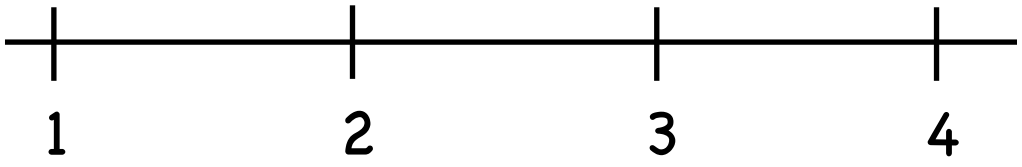
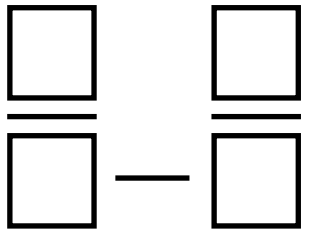
1. Player 1 chooses a numerator for the first round: 2, 3, 4, 6, or 8.
2. Each player spins for the denominator of their fraction.
3. Use the recording sheet. Each player, locate and label your fractions on the same number line.
4. The greatest fraction wins and picks the numerator for the next round.
5. Repeat for 10 rounds. The player who wins the most rounds, wins the game.



Recording Sheet - Version 2

	Locate and label your fraction (each player uses a different color).	Use <, >, or =
Round 1		
Round 2		
Round 3		
Round 4		
Round 5		

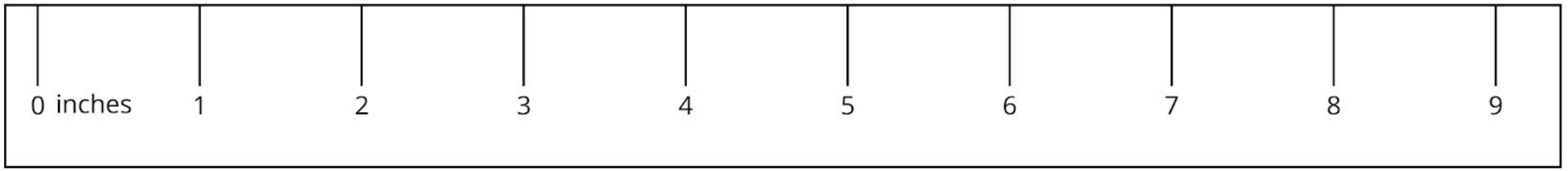
Recording Sheet - Version 2

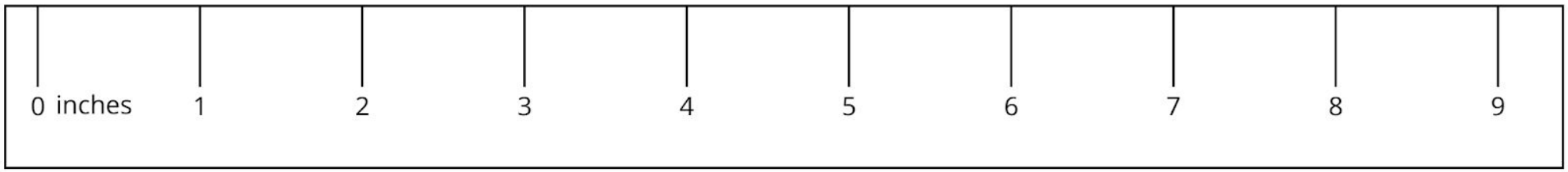
	Locate and label your fraction (each player uses a different color).	Use <, >, or =
Round 6		
Round 7		
Round 8		
Round 9		
Round 10		

Measure To The Nearest Half or Quarter Inch

Directions:

1. Label one ruler with halves and cut it out.
2. Find 5 objects and use this ruler to measure the objects to the nearest half-inch.
3. Record your measurements on the recording sheet.
4. Label the second ruler with fourths (quarters) and cut it out.
5. Find 5 objects and use this ruler to measure the objects to the nearest quarter-inch.
6. Record your measurements on the recording sheet.





Recording Sheet

Object	Measurement to the nearest half-inch.

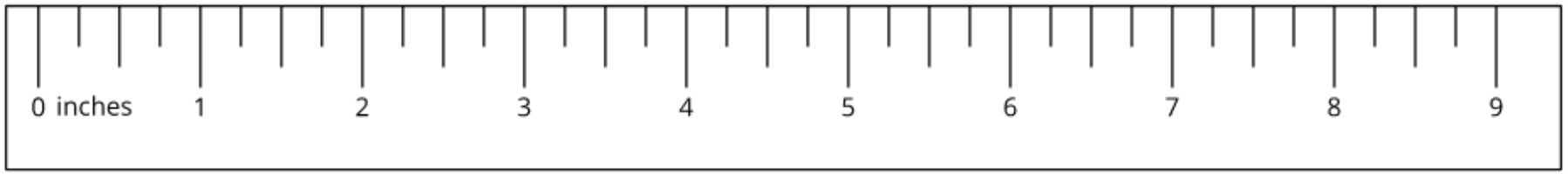
Object	Measurement to the quarter half-inch.

Measuring and Finding Equivalent Lengths

Directions: Measure the length of each object to the nearest half or quarter inch. Then find an equivalent length. (rulers are not to scale)

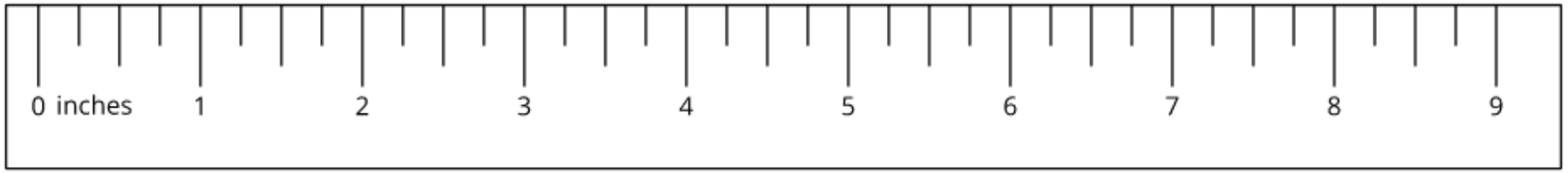
length: _____

equivalent length: _____



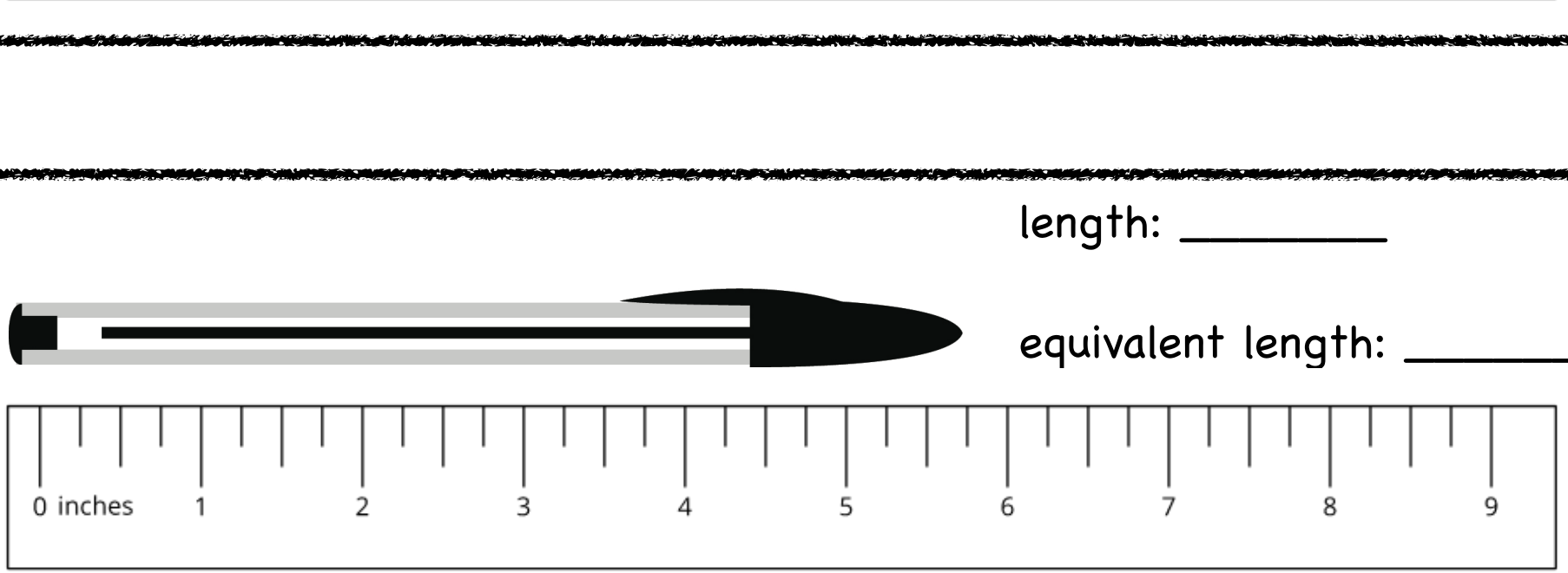
length: _____

equivalent length: _____



length: _____

equivalent length: _____

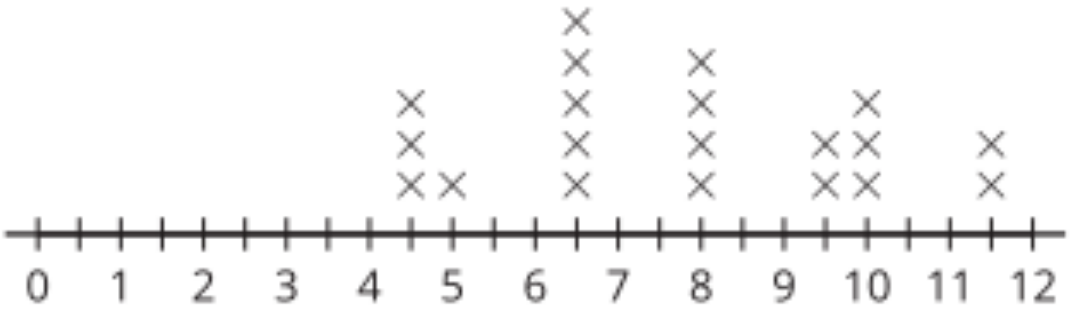


length: _____

equivalent length: _____

Interpret Data From a Line Plot

Directions: Select **ALL** of the statements that are true about the measurements in the line plot below.



length of paper airplanes (inches)

A. 5 paper airplanes had a length of $6\frac{1}{2}$ inches.

B. 6 paper airplanes had a length of $9\frac{1}{2}$ inches.

C. There were 12 paper airplanes measured.

D. There were 20 paper airplanes measured.

E. The shortest paper airplane was 5 inches.

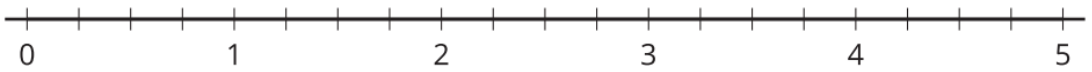
F. The shortest paper airplane was $4\frac{1}{2}$ inches.

Collect Data and Create a Line Plot

Directions:

1. Cut out the ruler.
2. Find 8 objects to measure with the ruler.
3. Record the object and the measurement in the chart below.
4. After you have measured all 8 objects, plot the length on the line plot and answer the questions.

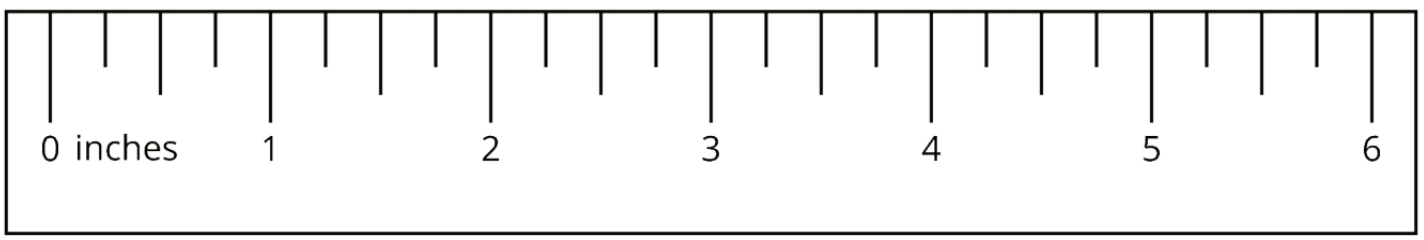
	Object	measurement to the nearest 1/4 inch
1		
2		
3		
4		
5		
6		
7		
8		



1. Which object had the longest length? _____

2. Which object had the shortest length? _____

3. Which length was the most common? _____



(ruler not to scale)