



Standards:

What do students have to do? Look for verbs.	With what?	With what parameters? Which figures, numbers, shapes?	Vocabulary	Essential Understandings

Equal Schmequal

This game is for 2 players.

DIRECTIONS:

Cut out the playing cards below.

Turn the playing cards upside down and mix them up.

Take turns drawing one card at a time.

If you have two cards with equal amounts, put them in two of the boxes on your game board. If you have two cards with unequal amounts, place them facedown in their original positions.

The first player to fill up all of the boxes on her/his game board wins.

$10 + 2$	$1 + 6$	$6 + 6$	$3 + 4$
$8 + 2$	$3 + 3$	$5 + 5$	$4 + 2$
$5 + 4$	$7 + 4$	$8 + 1$	$1 + 11$
$0 + 6$	$3 + 2$	$5 + 1$	$1 + 4$
$11 + 2$	$3 + 0$	$10 + 3$	$1 + 2$
$4 + 4$	$2 + 2$	$8 + 0$	$3 + 1$

Equal Schmequal Game Board

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Problem Solving Types

Join	<p>Result Unknown Mark has 45 erasers. His sister gave him 35 more. How many erasers does Mark have?</p>	<p>Change Unknown Caitlyn has 32 stickers. Suzy gave her some more. Now Caitlyn has 58 stickers. How many stickers did Suzy give her?</p>	<p>Start Unknown Joey had some cookies. Susie gave him 3 more. Now he has eight cookies. How many cookies did Joey start with?</p>
Separate	<p>Result Unknown Matt had 36 erasers in his collection. He gave 19 to his brother. How many erasers did Matt have in his collection?</p>	<p>Change Unknown Hannah had \$57. She bought some school supplies. Then she had \$23 left. How much money did Hannah spend on school supplies?</p>	<p>Start Unknown Katie had some cookies. She gave $1\frac{1}{2}$ to Andrea, then had $2\frac{1}{2}$ left. How many cookies did Katie have to start with?</p>
Part-Part-Whole	<p>Whole Unknown Cindy owns 15 fiction books and 73 non-fiction books. How many books does Cindy own?</p>	<p>Part Unknown Betty has 19¢ in her piggy bank. She has 9¢ in pennies. The rest are nickels. How much money does she have in nickels?</p>	
Compare	<p>Difference Unknown Chris had 27 Wii games. Jason had 44 Wii games. How many more Wii games does Jason have than Chris?</p>	<p>Larger Unknown Laura has 6 fewer pennies than Jacob. Laura has 12 pennies. How many pennies does Jacob have?</p>	<p>Smaller Unknown Whitney has 8 fewer pennies than Sydney. Sydney has 22 pennies. How many pennies does Whitney have?</p>

Classifying Four Types of Problems

1. Connie has 13 stickers. Five are red and the rest are blue. How many blue stickers does Connie have?
2. Connie has 13 marbles. She has 5 more marbles than Jim. How many marbles does Jim have?
3. Connie had some markers. Jim gave her 5 more markers. Now she has 13 markers. How many marbles did Connie have to start with?
4. Connie had 13 stickers. She gave 5 stickers to Jim. How many stickers does she have left?

Classifying Four Types of Problems

5. Connie has 13 stickers. Five are red and the rest are blue. How many blue stickers does Connie have?
6. Connie has 13 marbles. She has 5 more marbles than Jim. How many marbles does Jim have?
7. Connie had some markers. Jim gave her 5 more markers. Now she has 13 markers. How many marbles did Connie have to start with?
8. Connie had 13 stickers. She gave 5 stickers to Jim. How many stickers does she have left?

Answers:

1. part unknown
2. compare: smaller unknown
3. join: start unknown
4. separate: result unknown

Paper Plate Fractions

Objective: Students will create the area model of fractions using paper plates. They will be able to recognize and create halves, fourths, and eighths.

Materials:

One white paper plate (any size will work)

Plates of another color (must be the same size as the white plates)

Crayons or markers

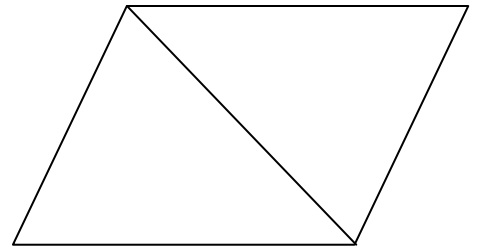
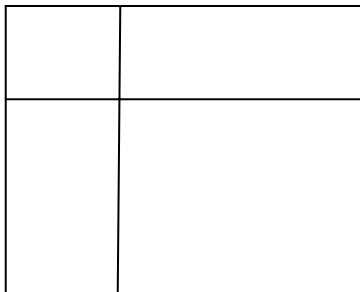
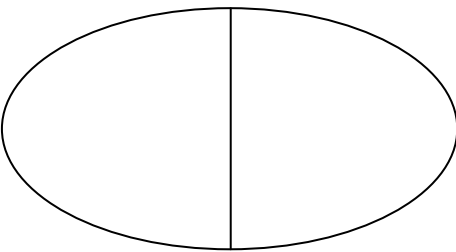
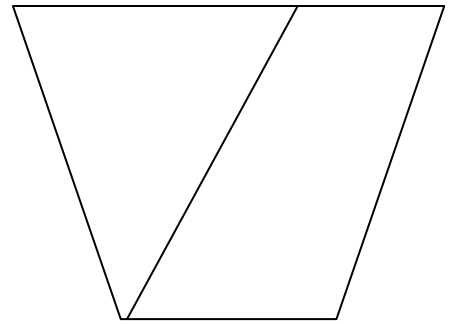
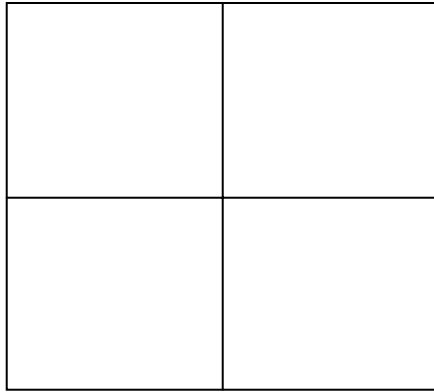
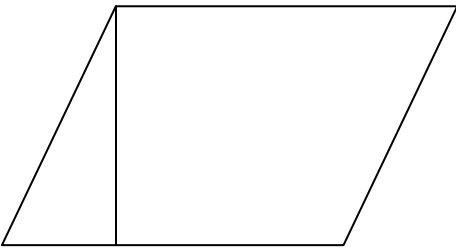
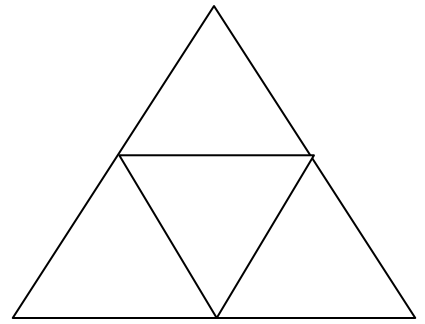
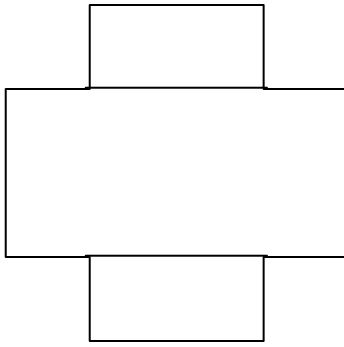
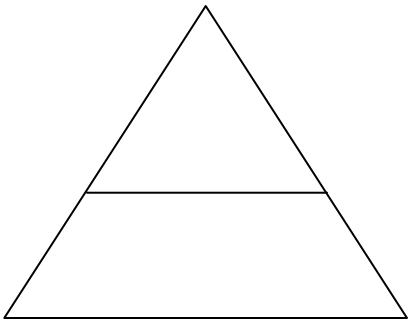
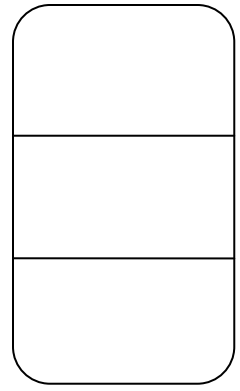
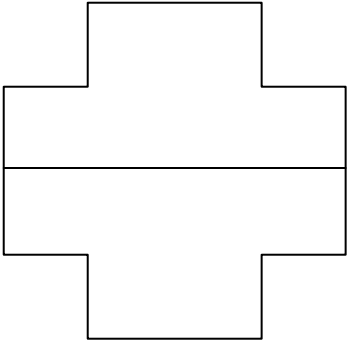
Scissors

Directions for making paper plate fractions.

1. On the white paper plate, use crayons or markers to create a "pizza". Students will usually color the plate orange or yellow to create a cheese pizza and then also color other things to represent toppings.
2. Next, cut a slit in each paper plate from the outer rim to almost the center of the paper plate. Put each plate together by slipping the paper plates together and forming one circle.
3. Move each plate around to show $\frac{1}{2}$ of the pizza.
4. Move each plate around to show $\frac{1}{4}$ of the pizza.
5. Move each plate around to show $\frac{1}{8}$ of the pizza.
6. The last move shows no pizza left.

Have students talk about the fraction of the pizza they have made and justify why that is the fraction represented.

Fraction Sort Cards



Good Mathematical Questioning

- How did you arrive at that answer?
- Why do you think that?
- What have you discovered?
- Have you thought of another way this could be done?
- Does that make sense?
- Does that always work?
- How could we prove that?
- Have we solved a problem similar to this one?
- Is that the only possible answer?
- Is your solution reasonable?
- Is there a real-life situation where this could be used?
- Where else would this strategy be useful?
- Do you see a pattern? Is there a general rule?
- What questions does this raise for you?
- What is the math in this problem?
- Have you tried making a guess?
- Would another recording method work as well or better?
- Give me another related problem.
- Is there another way to draw or explain that?
- How did you organize your information?
- Would it help to draw a picture?

0	0	0	0
1	1	1	1
2	2	2	2
3	3	3	3

4	4	4	4
5	5	5	5
<u>6</u>	<u>6</u>	<u>6</u>	<u>6</u>
7	7	7	7

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