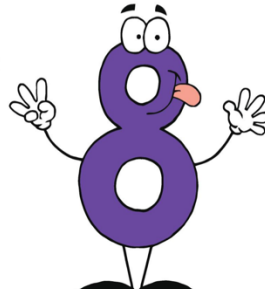
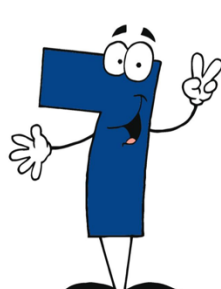
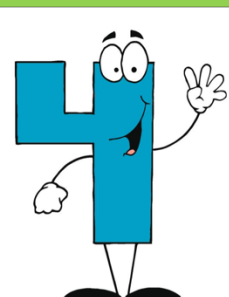
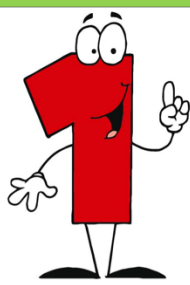
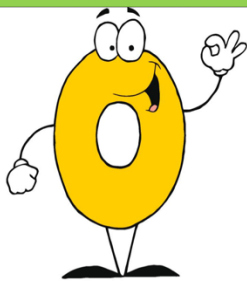


THE TRUST FOR PUBLIC LAND

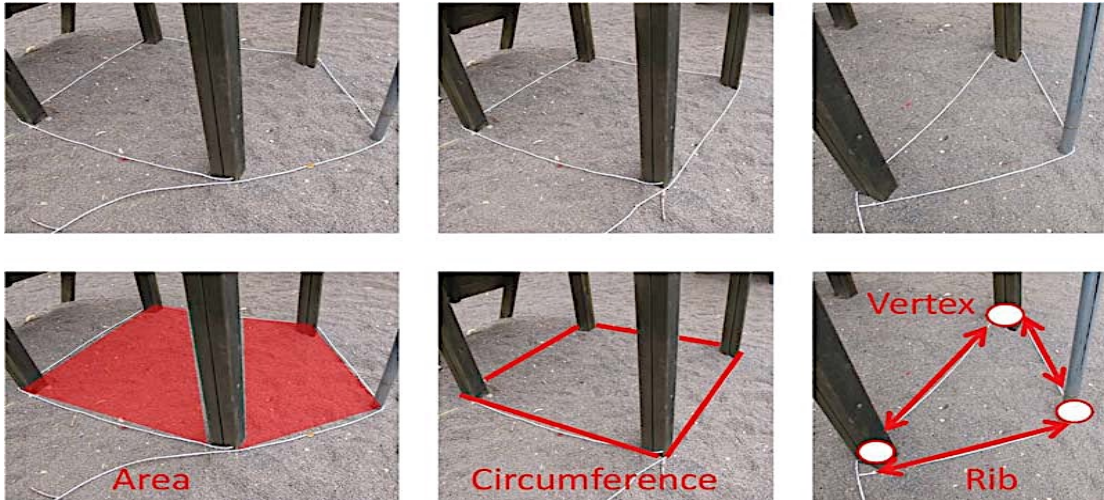
MATH PLAYGROUND PROGRAM

GRADE 2



GRADE 2 PLAYGROUND HIDDEN SHAPE HUNT 2.G.1

Find three shapes in the spaces between the legs of the play equipment. Using string or chalk, 1) find the shapes and 2) name the geometric properties of the shapes formed. See following example.



adapted from blog post of Yaara Bashan Haham at playgroundprofessionals.com

1. Find and draw shape #1.

2. What is the name of the shape? _____
3. How many sides does it have? _____
4. How many vertices does it have? _____
5. What is the relationship between the number of sides and vertices?

6. How many triangles can you divide the shape into? _____
7. Using a ruler or tape measure, measure the perimeter or circumference.

8. Using post-its, or square tiles, estimate the area of the shape.

1. Draw shape #2.

2. What is the name of the shape? _____
3. How many sides does it have? _____
4. How many vertices does it have? _____
5. What is the relationship between the number of sides and vertices?

6. How many triangles can you divide the shape into? _____
7. Using a ruler or tape measure, measure the perimeter or circumference.

8. Using post-its, or square tiles, estimate the area of the shape.

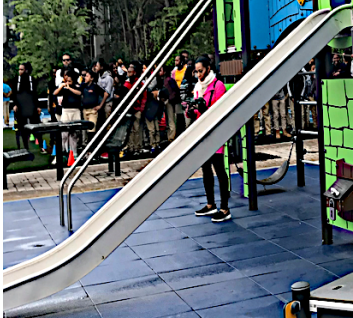

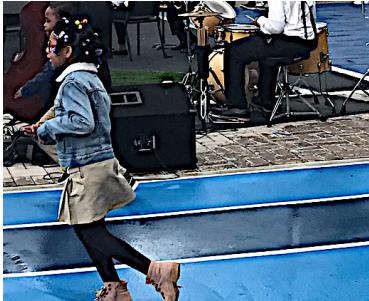

1. Draw shape #3.

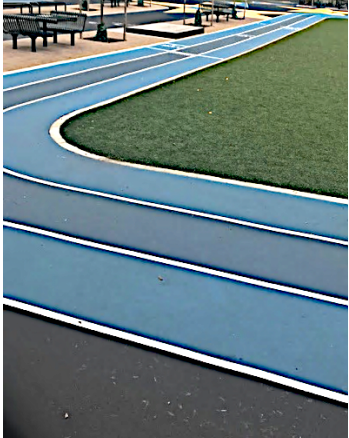


2. What is the name of the shape? _____
3. How many sides does it have? _____
4. How many vertices does it have? _____
5. What is the relationship between the number of sides and vertices?

6. How many triangles can you divide the shape into? _____
7. Using a ruler or tape measure, measure the perimeter or circumference.

8. Using post-its, or square tiles, estimate the area of the shape.

GRADE 2 PLAYGROUND MEASURE MADNESS 2.MD.1-4

| Object | Tool | Measurement |
|---|---|--------------------|
|  | <p>Using a measuring tape or yard/meter stick, find the width of a slide.</p> | |
|  | <p>Using a measuring tape or yard/meter stick, find the width of a climbing wall.</p> | |
|  | <p>Using a measuring tape or yard/meter stick, find the width of one lane of the running track.</p> | |
|  | <p>Using a measuring tape or yard/meter stick, find the width of a turf pod.</p> | |

| Object | Tool | Measurement |
|--|--|-------------|
| <p><i>For the following questions, the tool will be your step length -- the distance from the heel of one foot to the heel of the other, while walking at a normal pace. It's about 2 feet long. Count your steps and use a step length of 2 ft to estimate distances in the playground.</i></p> | | |
|  | <p>Count the number of steps to walk around the running track. If each step is 2 feet long, what is the distance around the track.</p> | |
|  | <p>Count the number of steps to walk around the gazebo. If each step is 2 feet long, what is the distance around the gazebo.</p> | |
|  | <p>Count the number of steps to walk around the outdoor classroom. If each step is 2 feet long, what is the distance around the outdoor classroom.</p> | |

GRADE 2 ODD OR EVEN PLAYGROUND HUNT 2.OA.3



Are they odd or even? Look carefully around the playground. Record if the number is odd or even. Did you know 0 is an even number?

| Item | Even or Odd? | |
|---|--------------|---|
| Number of streets around the playground | E | O |
| Number of gazebos | E | O |
| Number of posts that support the gazebo | E | O |
| Number of cans in a recycling center | E | O |
| Number of lanes in the running track | E | O |

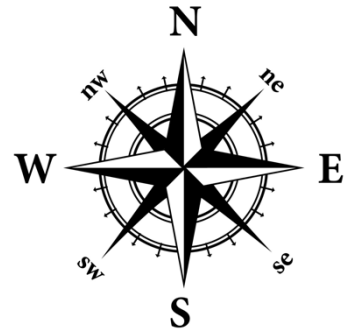
NAME _____

| Item | Even or Odd? |
|-------------------------------------|---------------------|
| Number of game tables | E O |
| Number of flat benches | E O |
| Number of basketball courts | E O |
| Number of benches with backs | E O |
| Number of trees | E O |
| Number of areas with play equipment | E O |
| Number of climbing walls | E O |
| Number of slides | E O |
| Number of steps | E O |
| Number of drinking fountains | E O |
| Number of teachers | E O |
| Number of girls | E O |
| Number of boys | E O |

NAME _____

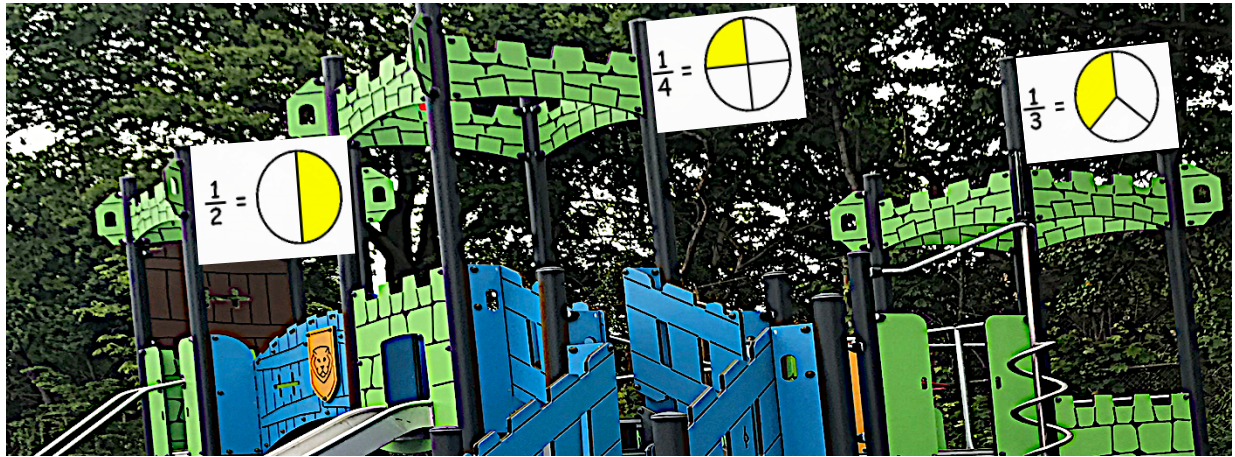
GRADE 2 CARDINAL PLAYGROUND DIRECTIONS

Your teacher will locate north in the playground and draw a compass rose with sidewalk chalk. Use this to identify the direction of the following.



| Item | Circle the Direction |
|------------------|----------------------|
| Street | N NE E SE S SW W NW |
| School | N NE E SE S SW W NW |
| Recycling Center | N NE E SE S SW W NW |
| Basketball Court | N NE E SE S SW W NW |
| Running Track | N NE E SE S SW W NW |
| Play Equipment | N NE E SE S SW W NW |
| Gazebo | N NE E SE S SW W NW |
| Tree | N NE E SE S SW W NW |
| Flat Bench | N NE E SE S SW W NW |
| Bench with Back | N NE E SE S SW W NW |
| Seal Art | N NE E SE S SW W NW |

GRADE 2 PLAYGROUND FRACTION SHADE 2.G.1,2.G.3



Find shapes in the playground, draw them and shade fractional parts.

Find a circle.
Where is it?

Draw it.
Shade $\frac{1}{4}$ of it.

Draw it again.
Shade $\frac{1}{2}$ of it.

Find a rectangle.
Where is it?

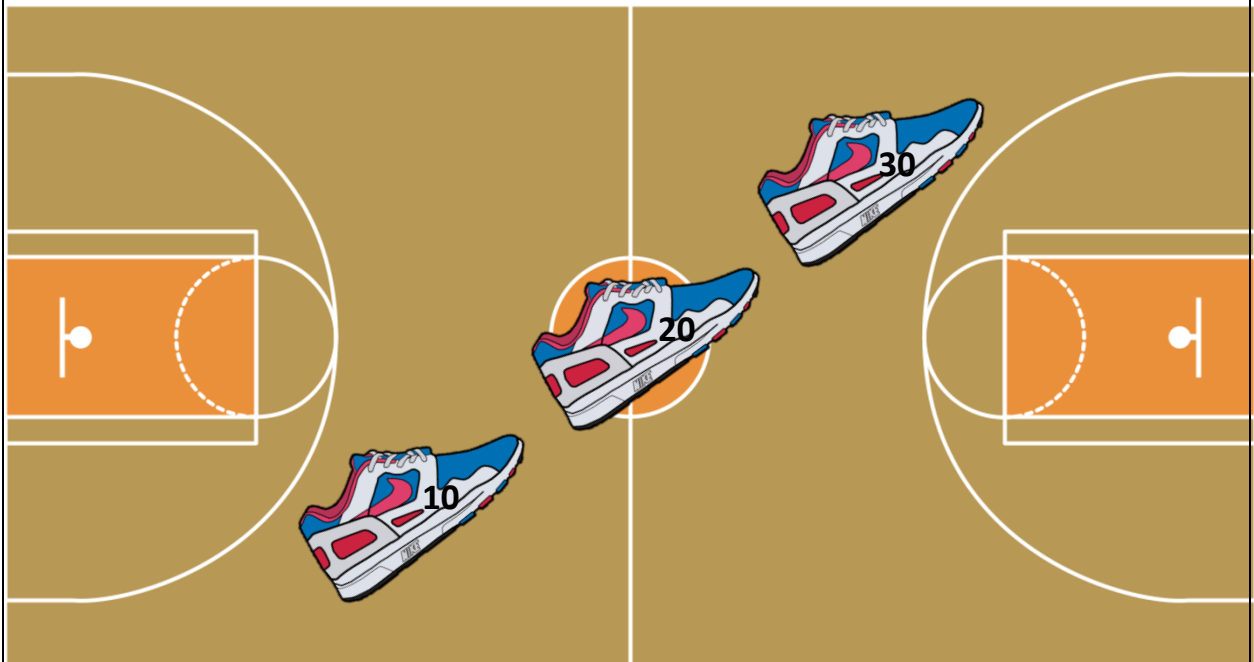
Draw it.
Shade $\frac{1}{3}$ of it.

Draw it again.
Shade $\frac{1}{4}$ of it.

Draw it again.
Shade $\frac{1}{4}$ of it in
a different way

| | |
|----------------------------------|---|
| Find a hexagon. Where is it? | Draw it. Shade $\frac{1}{2}$ of it. |
| | Draw it again. Shade $\frac{1}{2}$ of it in a different way |
| Find a triangle. Where is it? | Draw it. Shade $\frac{1}{3}$ of it. |
| | Draw it again. Shade $\frac{1}{4}$ of it. |
| Find a leaf. Where is it? | Draw it. Shade $\frac{1}{2}$ of it. |
| | Draw it again. Shade $\frac{1}{3}$ of it. |

GRADE 2 PLAYGROUND SKIP COUNT 2.NBT.2, 5, 7



| Question | Answer |
|--|--------|
| 1. Walk around the basketball court. Skip count by 10s for every step. What number did you end on? | |
| 2. Walk around the running track. Skip count by 10s for every step. What number did you end on? | |
| 3. Subtract the answer of #2 minus #1. What is the difference between the count around the running track and the basketball court? | |
| 4. Walk around the gazebo. Skip count by 10s for every step. What number did you end on? | |

NAME _____

| Question | Answer |
|---|--------|
| 5. Walk the width of the playground. Skip count by 10s for every step. What number did you end on? | |
| 6. Walk the length of the playground. Skip count by 10s for every step. What number did you end on? | |
| 7. Subtract the answer of #6 minus #5. What is the difference between the playground length and the width? | |
| 8. What is the lowest number you skip counted? | |
| 9. What is the highest number you skip counted? | |
| 10. Subtract #9-#8. What does it tell you about distances in the playground? Is there a big difference or small difference between the highest and lowest numbers? | |
| 11. Add another distance that you would like to measure by skip counting by 10s. What number did you end on? How much bigger is it than the smallest number you skip counted? | |

GRADE 2 PLAYGROUND I SPY GEOMETRY 2.G.1

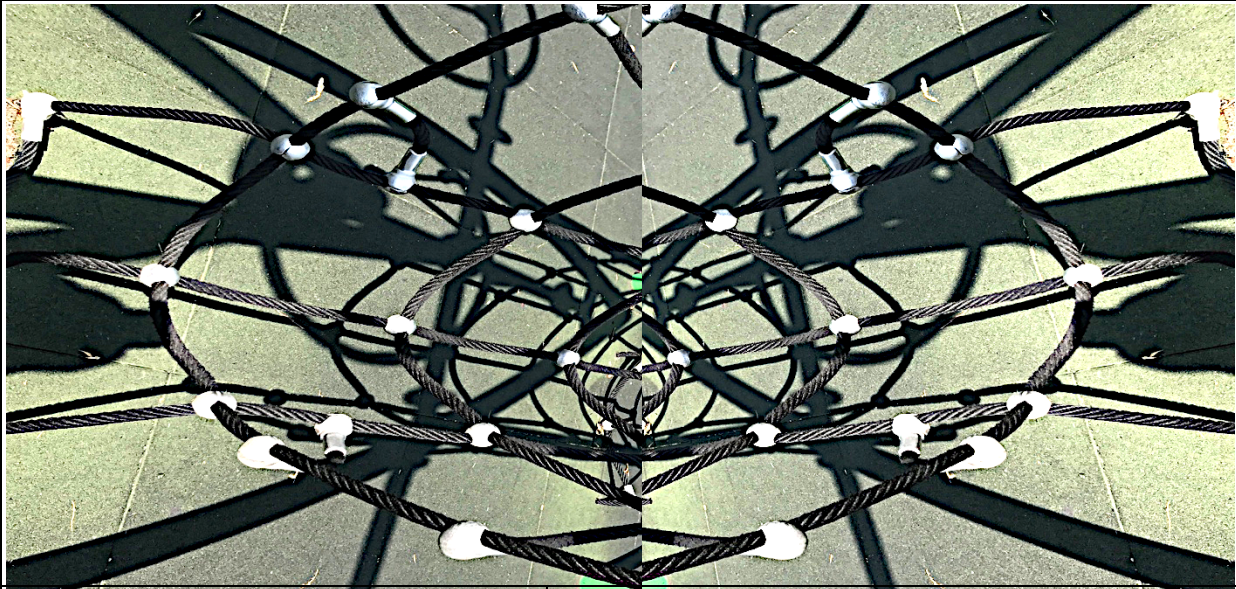


| I Spy ... | What Is It? |
|---|-------------|
| something that is a closed shape | |
| something with 4 straight sides | |
| something with more than 4 corners | |
| something that has a small angle | |
| something that has a huge angle | |
| something with no straight sides | |
| something that has straight sides of unequal length | |

NAME _____

| I Spy ... | What Is It? |
|--|-------------|
| something that has parallel lines | |
| something that has no parallel lines | |
| something that is a hexagon | |
| something that is a quadrilateral with no square corners | |
| something that is a composite shape | |
| something that has right angles | |
| something with a repeating pattern | |
| a flat shape | |
| a shape with thickness | |
| a cylinder | |
| a prism | |

GRADE 2 PLAYGROUND SHAPES, SIDES & ANGLES 2.G.1

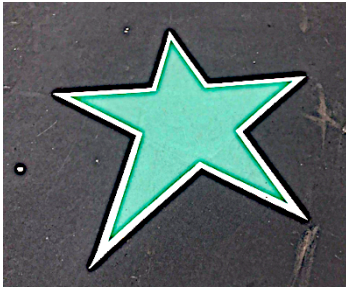


| Statement | True or False? If false, correct the statement. |
|--|--|
| The gazebo has 6 sides and 8 angles. | |
| The basketball court has 4 sides and 4 angles. | |
| The game board has 4 sides and 3 angles. | |
| The ping pong table has 4 sides and 4 angles. | |
| The running track has 4 sides and 4 angles. | |
| The tree bed has 4 sides and 4 angles. | |

NAME _____

| Statement | True or False? If false, correct the statement. |
|--|--|
| The most common polygon in the playground is a rectangle. | |
| The boulder in the outdoor classroom is also a polygon. | |
| Go to the play equipment. | |
| Name the polygons you see. | How many sides, how many angles? |
| | |
| | |
| | |
| Which shapes are not polygons? | |
| | |
| | |
| | |
| Go to the color seal art. | |
| Sketch the polygons in the color seal art. Label the sides and angles. | |
| | |

The following shapes are in other Trust for Public Land playgrounds.



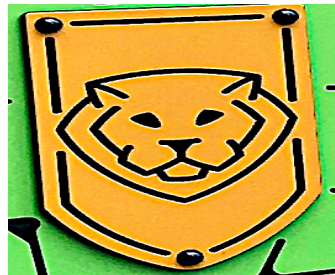
How many sides?

How many angles?



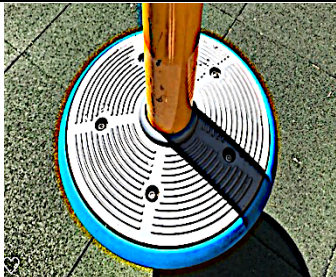
How many sides?

How many angles?



How many sides?

How many angles?



How many sides?

How many angles?



How many sides?

How many angles?

GRADE 2 PLAYGROUND TIME LINE 2.NBT.2, 2.MD.7

Print two sets of the time cards found in the pages that follow.

Divide the class into two groups.

Distribute each set of cards randomly to students in each group.

On the running track, have each group line up in order from the earliest to latest time.

Check their time lines, collect and redistribute cards.

Extension: After the students line up, have each student state his/her time and then state the time that is five minutes earlier and five minutes later.

NAME _____

| | |
|----------------|--------------|
| 7:15 | Quarter to 7 |
| Half Past 7 | 7:05 |
| 7:25 | 7:55 |
| Half Past 8 | 8:20 |
| Quarter Past 8 | Quarter to 8 |

NAME _____

| | |
|----------------|--------------|
| 8:35 | 8:55 |
| Half Past 9 | Quarter to 9 |
| 9:20 | 9:50 |
| Quarter Past 9 | 9:05 |
| Half Past 10 | 10:40 |

NAME _____

| | |
|-----------------|-----------------|
| Quarter Past 10 | Quarter to 10 |
| 10:10 | 10:55 |
| Quarter to 11 | Quarter Past 11 |
| Half Past 11 | 11:25 |
| 11:55 | 11:35 |

GRADE 2 PLAYGROUND FRACTION FUN 2.G.3



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

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



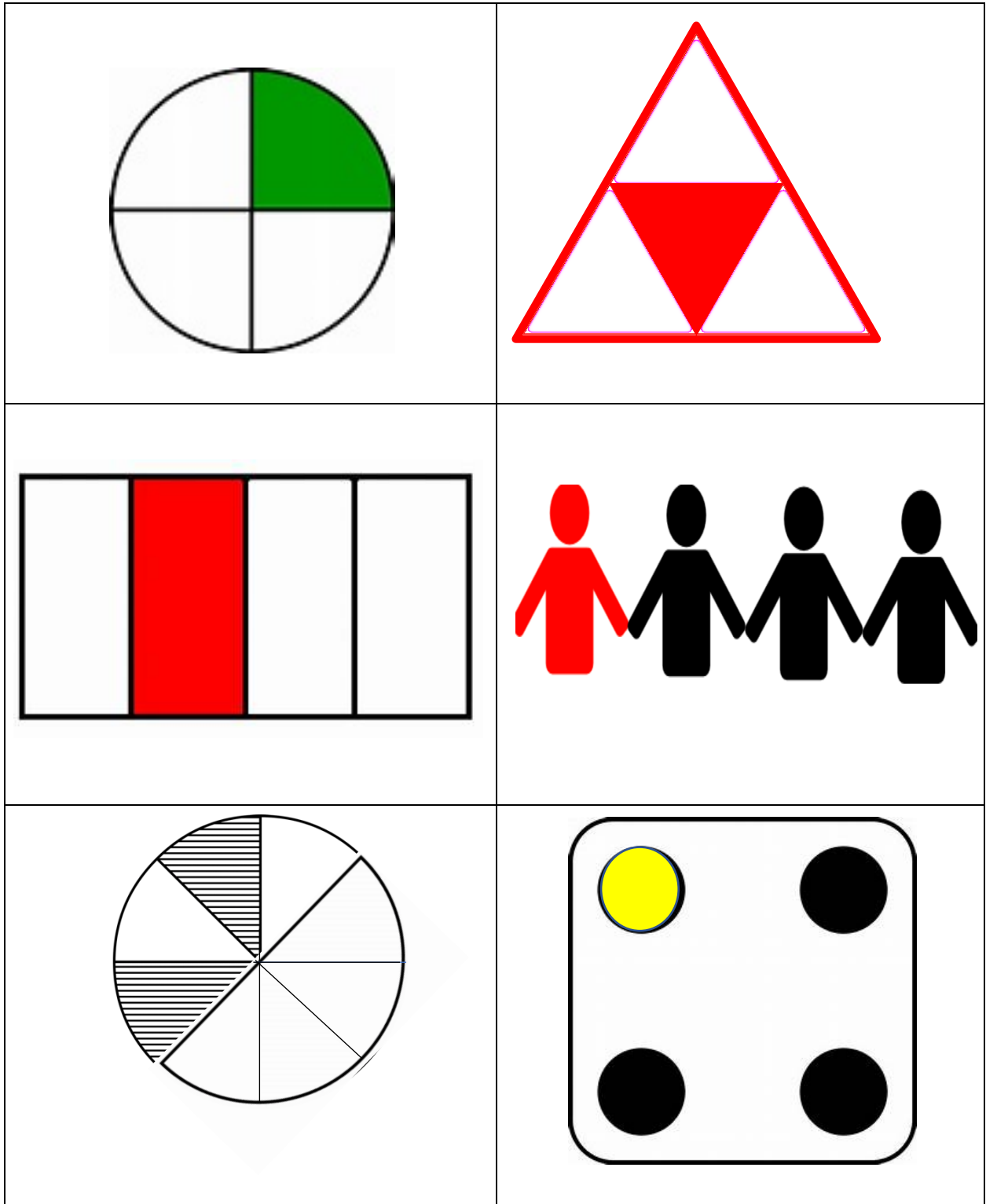
This fraction game is a great activity in the outdoors, where students have the room to organize themselves into groups, while practicing their understanding of fractions.

Print and cut fraction cards that follow.

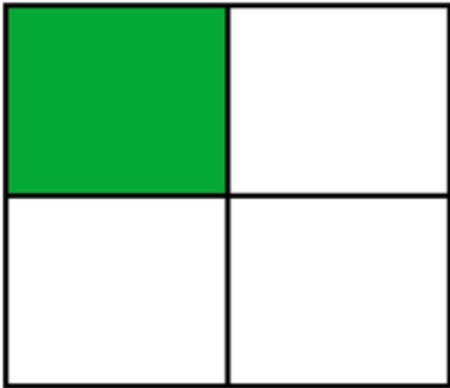


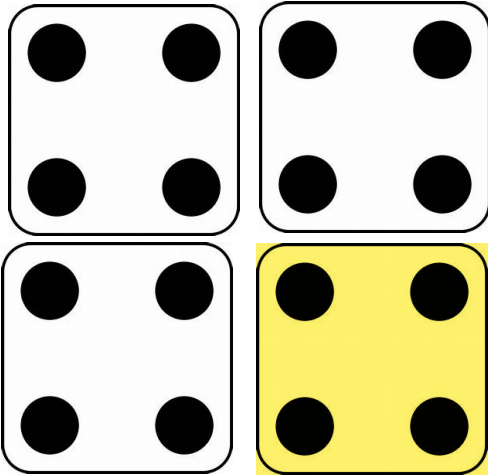

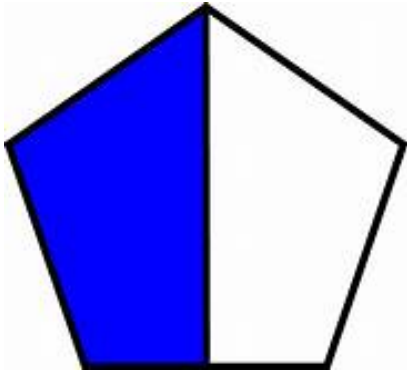
Distribute them to the students and take them out to the playground.

Have all the 1/4s meet in a group, the 1/2s meet in another group and the 1/3s meet in yet another group.

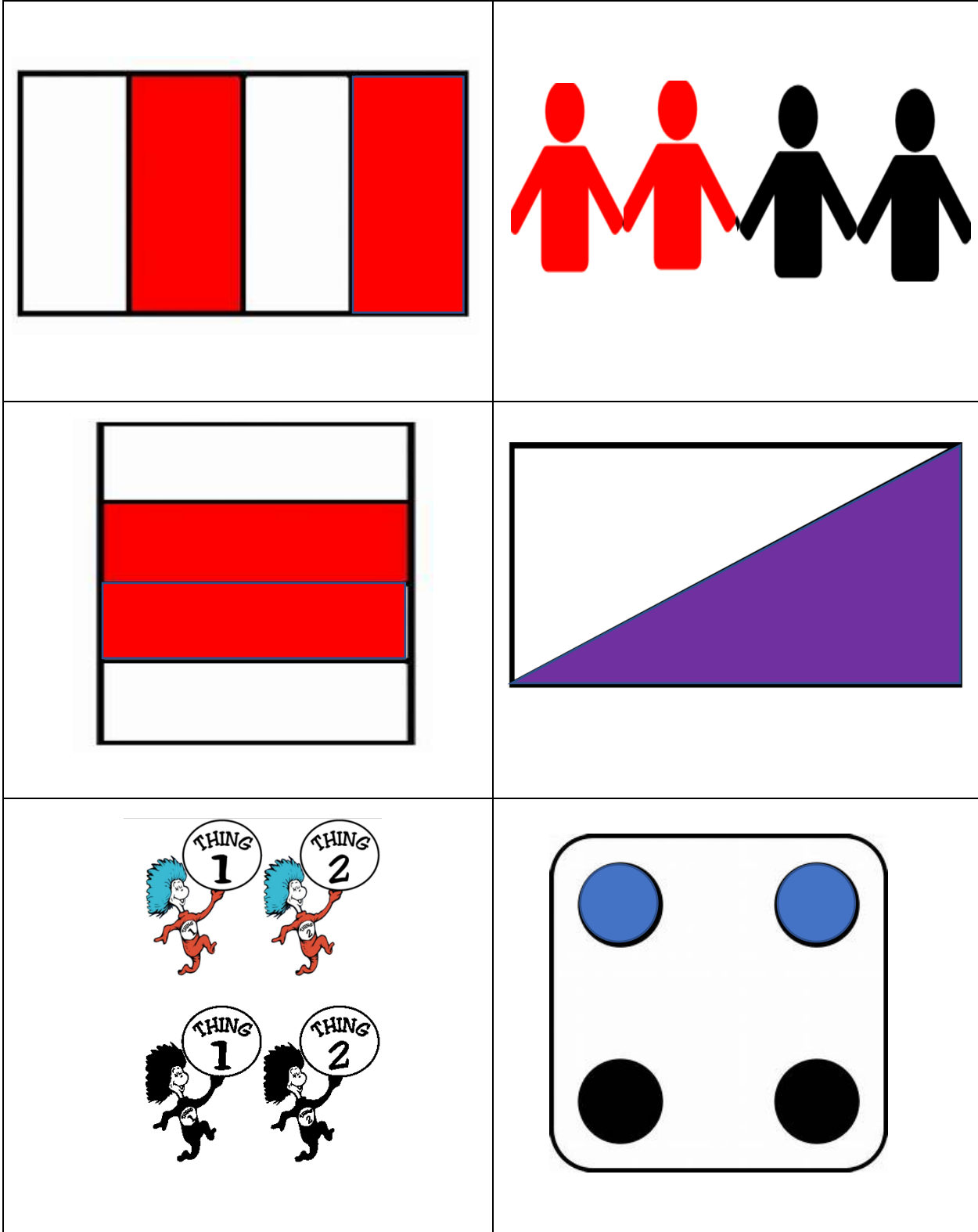
Collect cards, shuffle and repeat.

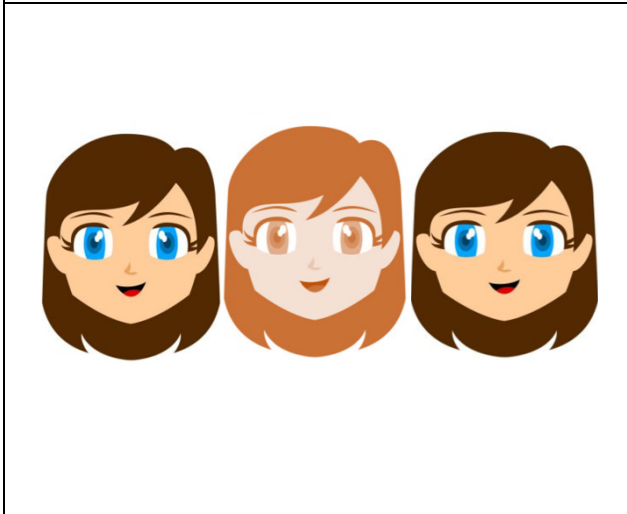
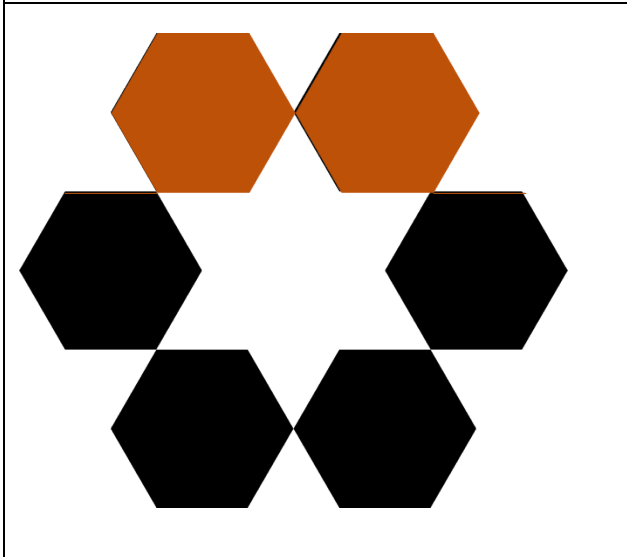
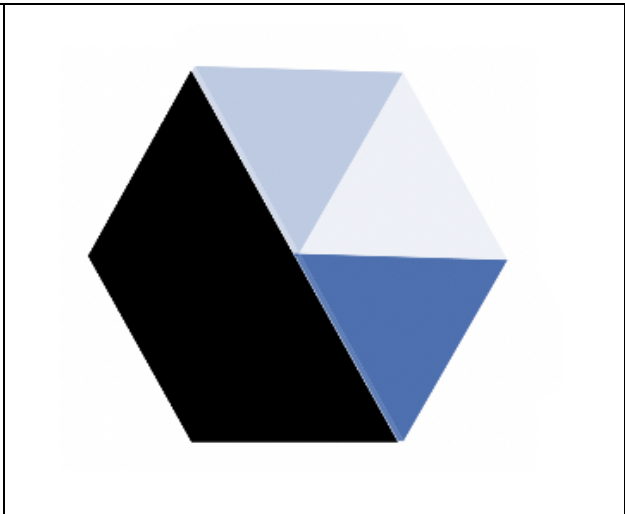
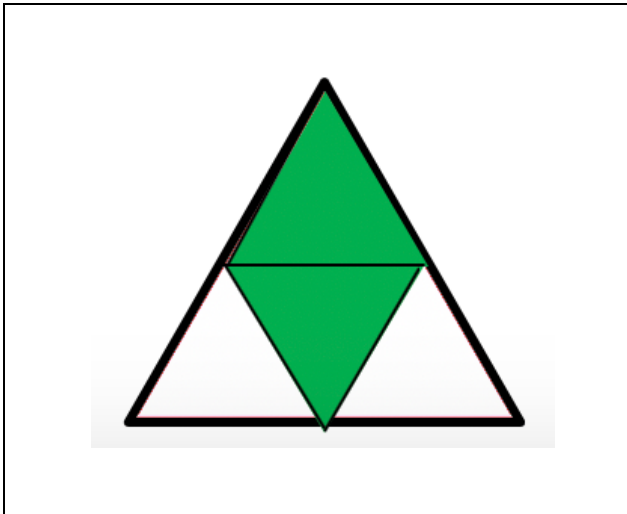


NAME _____

| | |
|---|--|
|  |  |
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|  |  |

NAME _____





NAME _____

