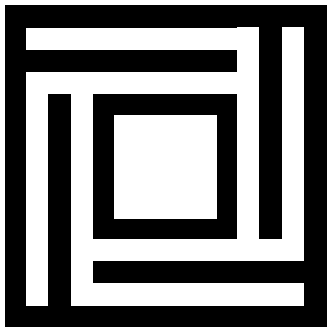
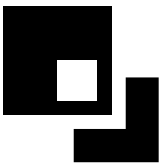
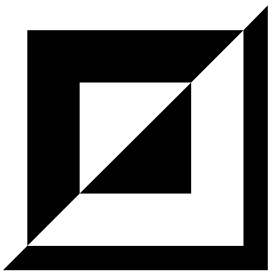
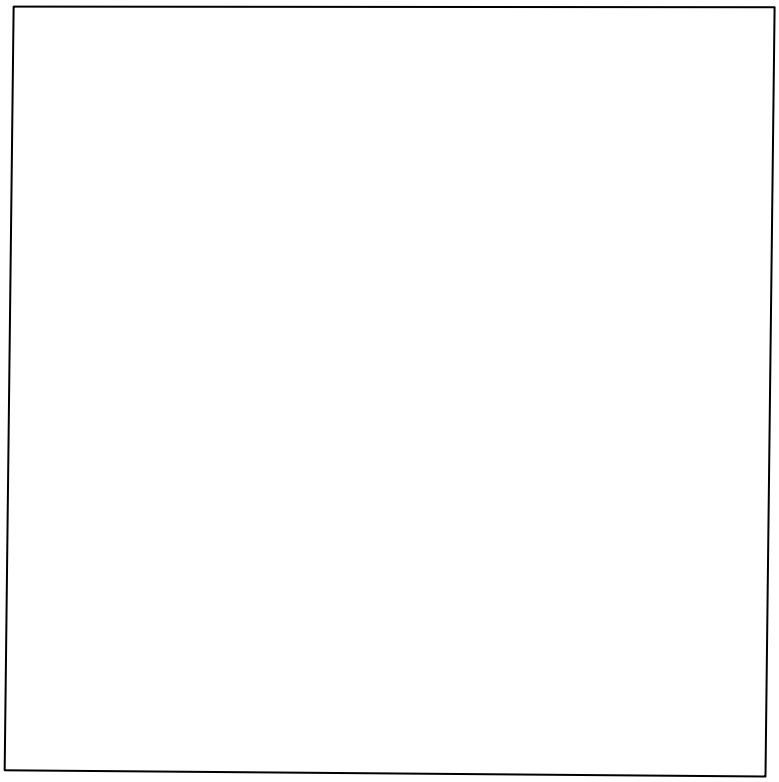
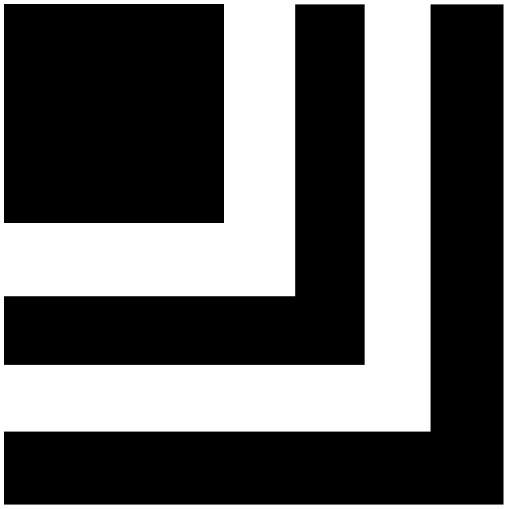
# Square Deal





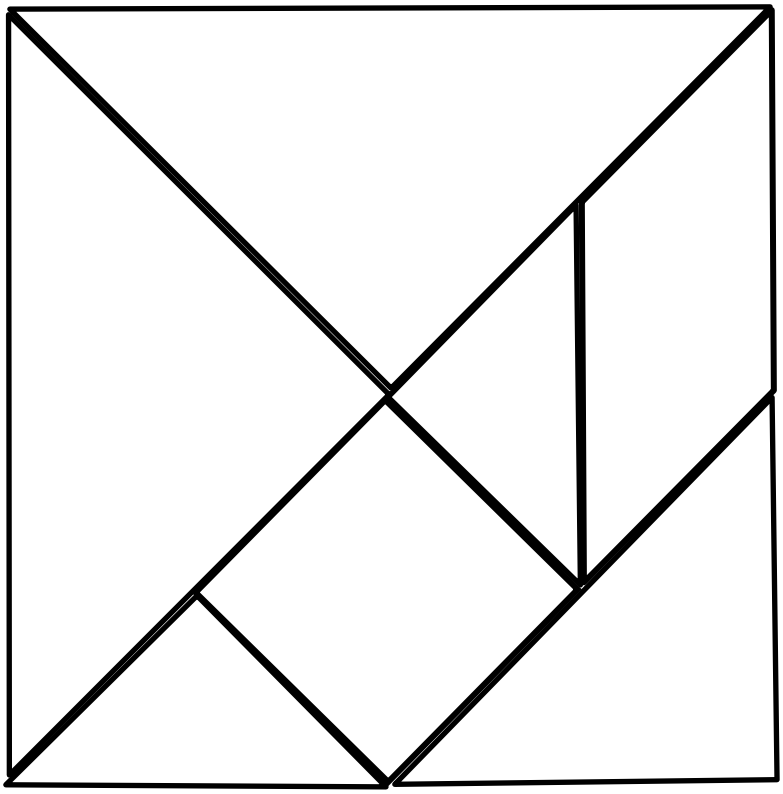






# *Square Deal*

If the Tangram puzzle is 1, what fraction is each piece of the puzzle?  Write the fraction in each piece.



If the small square is 1, what is the value of each piece?

Trace the pieces and write the fraction of each.

# ***Color Tile Fractions***

## Directions and Questions

1. Take out 20 tiles.
2. Divide your tiles into equal groups.
    - ***How many groups do you have?***
    - ***How many tiles are in each group?***
    - ***What fraction of the set is in each group?***
    - ***What fraction of the set does one group represent?***
3. Place your tiles in two groups.
    - ***How many tiles are in each group?***
    - ***What fraction of the set is in each group?***
    - ***What fraction of the set does one group represent?***

4. Get into pairs.
5. Take out a number of tiles that can be fair shared into two piles.
    - ***How many tiles are in your set?***
    - ***How many tiles are in each group?***
    - ***What fraction of the set is in each group?***
    - ***What fraction of the set does one group represent?***
6. Discuss equivalent fractions.
    - ***What do you notice about the relationship between the numerator and the denominator in all of these fractions?***

7. Take out 1 green tile, 4 red tiles, and 3 yellow tiles.
8. Place these tiles onto the first rectangle on your "Fraction Parts" sheet.
    - ***What fraction of the rectangle is green?***
    - ***What fraction of the rectangle is red?***
    - ***What fraction of the rectangle is yellow?***
    - ***Do all of the red tiles have to be together to make the same fraction on this rectangle?***

9. Complete the other rectangles on the sheet according to the directions given by the rectangle.

***Teacher Notes:***

- You will need to copy page 37 of 65 from the curriculum guide, first grading period.

- Provide color tiles and colored pencils.

# ***Color Tile Fractions***

***Student worksheet***

Name: _____ Date: _____

Follow the directions on the center card and answer the following questions:

1. ***How many groups do you have?*** _____

- ***How many tiles are in each group?*** _____
- ***What fraction of the set is in each group?*** _____
- ***What fraction of the set does one group represent?*** _____

- ***How many tiles are in each group?*** _____
- ***What fraction of the set is in each group?*** _____
- ***What fraction of the set does one group represent?*** _____

- ***How many tiles are in your set?*** _____
- ***How many tiles are in each group?*** _____
- ***What fraction of the set is in each group?*** _____
- ***What fraction of the set does one group represent?*** _____
- ***What do you notice about the relationship between the numerator and the denominator in all of these fractions?***

_____

_____

_____

- ***What fraction of the rectangle is green?*** _____
- ***What fraction of the rectangle is red?*** _____
- ***What fraction of the rectangle is yellow?*** _____
- ***Do all of the red tiles have to be together to make the same fraction on this rectangle? Explain your answer.*** _____

_____

_____

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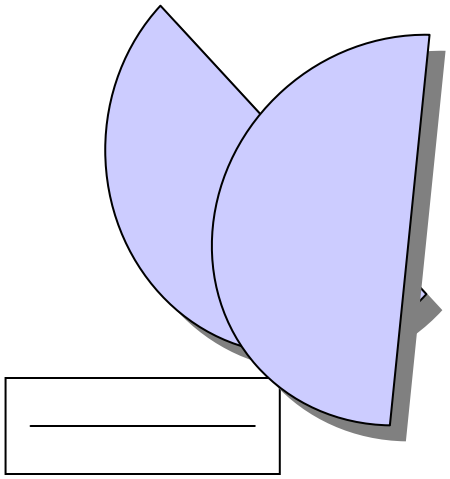
# ***Roll On Fractions***



## Steps and Questions

1. Tape two sheets of paper together.
2. Draw a line down the middle of the two sheets. Leave about $\frac{1}{2}$" on either end.
    - The line should be as long as the circumference of the whole circle.
    - ***How can you make sure the line is the same length as the circumference of the circle?***

3. Label one end of your line "0".
    - ***How did you determine which end to label with a 0?***

4. Next roll the $\frac{1}{4}$ fraction piece onto the line from one end of the curve to the next. Start at the 0 and mark the end of your roll $\frac{1}{4}$.
    - ***How many times would you have to roll this piece to reach the place where 1 will be on your number line?***

5. Next select the $\frac{1}{3}$ fraction piece and roll it from the 0 to the end of the curve.
    - ***Will $\frac{1}{3}$ land closer to 0 than $\frac{1}{4}$, closer to $\frac{1}{2}$ than the $\frac{1}{4}$, or greater than $\frac{1}{2}$?***

6. Repeat this process with all of the fraction pieces. Then roll all of the fractions to 1. Mark your number line after each roll.
    - ***How will you know when you get to 1?***
    - ***Compare the denominators with the number of rolls it takes to get to 1.***
    - ***Will there be any places where there will be more than one fraction? Explain.***

# 3-D Shape Match

- As a group select one of the 3-D shapes.
- Write the number of the shape and the name of the shape in the first column of the chart. Complete the chart for that shape.
- Continue to select different shapes and complete the chart for each shape.
- Make sure each group member is responsible for giving the answers for at least one shape.

## ***Teacher Notes***

- You will need to set out and number 7 geometric solids.

- Copy page 57 of 90 from the curriculum guide for each student.

# Match the Shape

- Look at the items on the table.
- On your own fill in the “Match the Shape” sheet.
- Write the name of the common object under the name of the geometric solid that has the same shape.
- Check your answers with the other members of your group.
- Set your stop watch for three minutes. Add the names of other common objects under each geometric solid.
- Check your answers with the other members of your group. Cross off any objects that other group members have written.
- See who has the most new items named.

## *Teacher Notes*

- You will need to collect and display an everyday item for each shape.
- You will need a timer.
- You will need to copy page 56 of 90 from the curriculum guide, 4th quarter geometry.

# Where Is That Figure?

- Separate the cards into three groups:  name cards, shape or line cards, and characteristics cards.
- Match the characteristic cards with the correct shape or line card and the corresponding name card.
- You may need to readjust some cards that have already matched so that all cards will have a match at the end of the activity.

## *Teacher Notes*

- You will need to copy and cut out cards from pages 52 to 55 of 90 from the curriculum guide, 4th quarter geometry.

# Shape Match

- Place all of the shape cards face up so that all group members can see them.
- Place the characteristic cards in a pile, face down.
- Each group member takes a turn, selects a characteristic card, and reads it to the group.
- Each group member tries to find the matching shape card. They place their hand over the shape card when they find it.
- Everyone checks the characteristic card and determines if the shape fits it.
- At the end of the game all shapes should have a characteristic card matched with it.

***Teacher Notes***

- You will need to copy and cut out the cards on pages 47 and 48 of 90 from the curriculum guide, $4^{th}$ quarter geometry.

# ***Prime and Composite Numbers***

- Find the definition for a ***prime number***.
- Fold a piece of 9” by 18” construction paper in half and put the title “Prime Numbers” on the inside, left hand page. Write the definition for prime numbers.
- Complete the answer sheet.
- On the right side of the inside of your book, staple the answer sheet and your completed hundred’s chart with the hundred’s chart on the top. Staple across the top.
- Decorate and title the outside of your “Prime Numbers” book.
- Complete another book with “Composite Numbers” following the same directions.

Name: _____

Date: _____

**Cross out any numbers on your hundred's chart that are not prime numbers. Circle all of the prime numbers with a crayon or colored pencil.**

**What is a prime number?**

**Explain how you determined which numbers to keep on your hundred's chart.**

Name:_____ Date:_____

***Prime numbers are numbers greater than 0 with exactly two different factors; 1 and itself.***

1. On the hundreds chart circle the number two and put an x on all of the other multiples of 2.
   - ***Is two a prime number? Explain***.

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2. Using a different color, circle the number three and put a line across the middle of all the other multiples of three.
   a. Notice that some of the numbers have an x and a line across them.
   ***b. Why did this happen?***

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3. We are trying to find the prime numbers.
   ***a. Do we need to continue to cross out any other multiples?***
   ***b. Multiples of four? Five? Any others? Explain.***

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4. Continue to cross out multiples of single digit numbers until you know you have eliminated all of the numbers on the chart that are not prime.
   ***a. What are the prime numbers between 1 and 100?***

| |
|---|
| |

Name: _____

Date: _____

**Cross out any numbers on your hundred's chart that are not composite numbers. Circle all of the composite numbers with a crayon or colored pencil.**

**What is a composite number?**

**Explain how you determined which numbers to keep on your hundred's chart.**