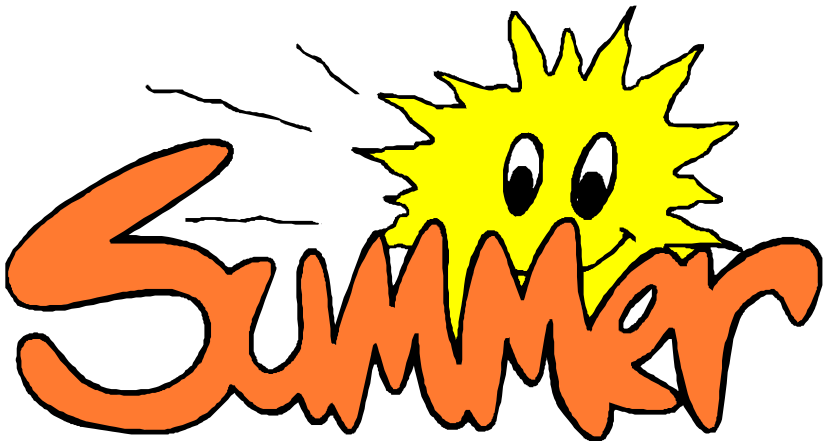


MATH PACKET

for

Students Entering the **Second Grade**

(first grade review)

Students Name: _____
First and Last

Student's Second Grade Teacher: _____

Parent's Signature: _____

INTRODUCTION

Welcome to the summer math packet for students entering Second Grade. The design of the activities is meant to support instruction in the new curriculum in both its content and presentation. Therefore, the activities are not to be done as independent problems, but to be worked on with a parent, guardian or older brother or sister. Talking about the problem is an important part of completing each activity.

In First Grade, students explored math concepts based on four standards. The twelve activities in this summer math packet reflect the content of those four standards.

To receive credit for this packet, students must complete at least eight of the activities with at least one being from each of the 4 standards. Some of the activities are the same as the previous year. This also reflects a characteristic in the new curriculum that encourages students to spend time with an idea and seek many ways of finding a solution.

Summer Packet Content:

Standard 1: Operations and Algebraic Thinking

- Activity A: Birthday Oak
- Activity B: Mary's Apple Balancing Act
- Activity C: Aquarium Combinations

Standard 2: Number and Operations in Base Ten

- Activity A: Fallen Stars
- Activity B: Birthday Treat Bags
- Activity C: Bottles of Water

Standard 3: Measurement and Data

- Activity A: Non-Standard Measurement
- Activity B: Jack & Jill
- Activity C: Esmeralda's Day

Standard 4: Geometry

- Activity A: Matching Shapes
- Activity B: Folding Paper
- Activity C Tangram Polygons

All packets are due on Friday, September 13, 2019. There will be a prize and certificate for those students returning to Ritchie Park in the Fall who complete the required activities. Before returning this packet in the fall, please make sure that the front of the packet is **completed and signed**. We must have the student's **FIRST and LAST** name to ensure that credit will be given to the right child. Thank you!

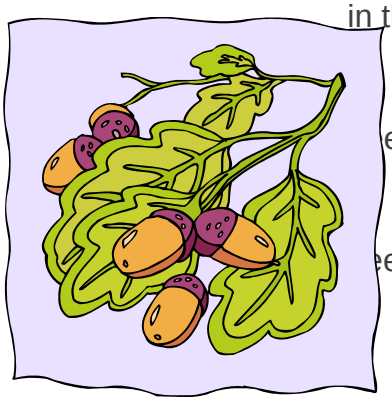
Sincerely,

Ms. Catherine Long, Principal
Mrs. Susan DiManna, Staff Development Teacher

Entering Grade 2: Operations and Algebraic Thinking, Activity A

Directions: Read through the following problem and answer the questions. Use the space on the back of this page to complete your work. You may work with a parent, older brother or sister, or friend, but you must show all of your ideas in words, pictures or symbols to completely answer the questions.

On the day Miguel was born, his father planted an oak tree in the backyard. The tree was 10 feet tall on the day Miguel



On his first birthday his parents measured the height of the e. It had grown to 12 feet.

The following year, when Miguel was two, the tree was 14 eet tall.

On Miguel's third birthday, the tree was 16 feet tall.

A) If this pattern continues, how tall will the tree be on his fourth birthday?

B) How many feet does the tree grow each year?

CHALLENGE:

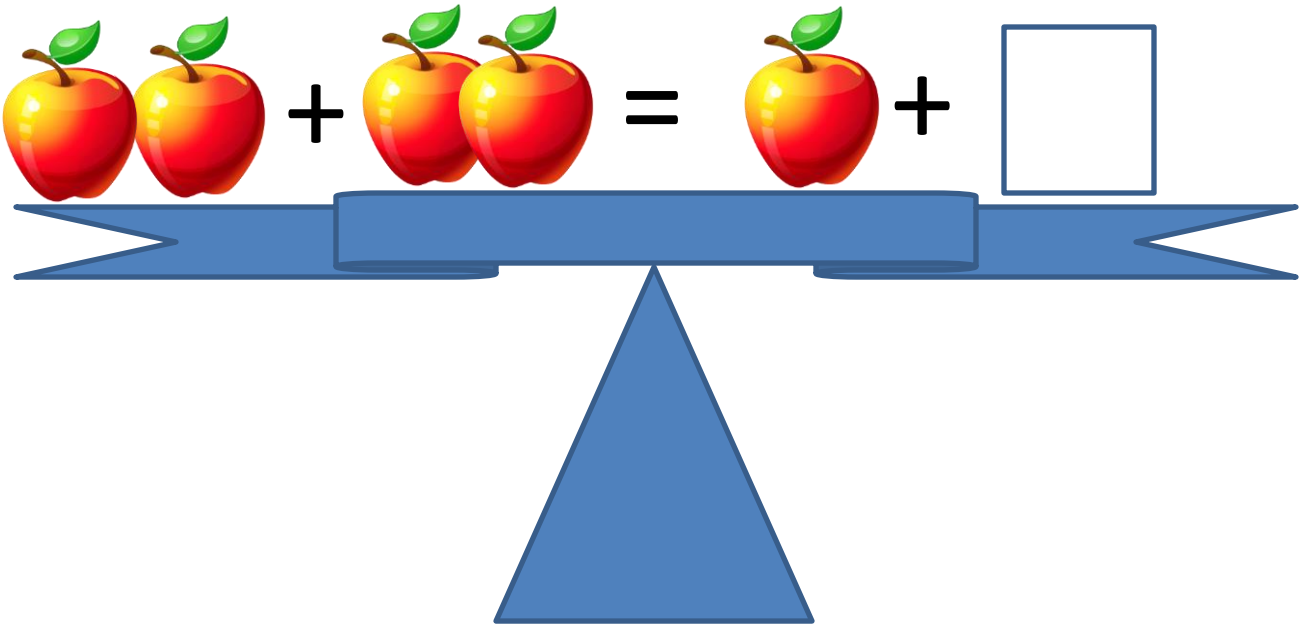
C) How tall will the tree be when Miguel celebrates his tenth birthday?

D) On his tenth birthday, how much will the tree have grown since it was first planted?

REMEMBER to show how you know your answers are correct.

Entering Grade 2: Operations and Algebraic Thinking, Activity B

Directions: Read through the following problem and answer the questions. Use the space on the back of this page to complete your work. You may work with a parent, older brother or sister, or friend, but you must show all of your ideas in words, pictures or symbols to completely answer the questions.



Above is a simple balance upon which Mary has placed 5 apples.

A) How can you tell that it is not a real balance?

B) If it were a real balance, what does Mary need to do to make this illustration true?

These types of number sentences are called equations, because they present two sets of equal numbers on either side of an equal sign.

A) Complete the following equations (on the next page) to demonstrate your understanding of equations:

$14 + \square = 20$

$10 + \square = 4 + 8$

$\square + 16 = 8 + 9$

$5 + 14 = \square + 3$

CHALLENGE:

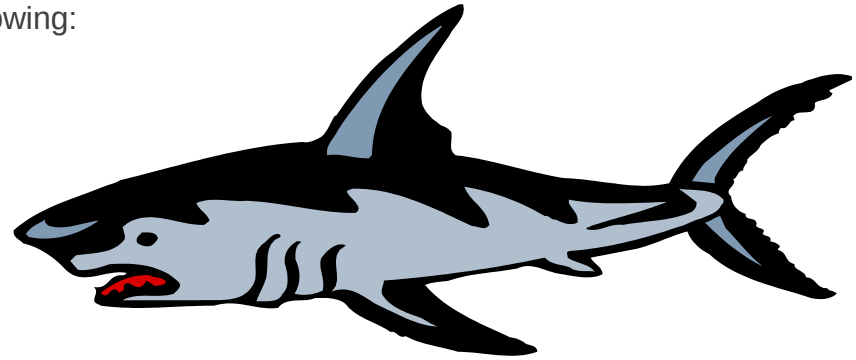
Use the following numbers just one time each and create 3 more equations on your own: 0, 2, 3, 4, 5, 8, 10, 11, 14, 17 & 20

Entering Grade 2: Operations and Algebraic Thinking, Activity C

Directions: Read through the following problem and answer the questions. Use the space on the back of this page to complete your work. You may work with a parent, older brother or sister, or friend, but you must show all of your ideas in words, pictures or symbols to completely answer the questions.

On a trip to the Aquarium, Mrs. Gramzinski's class made the following observations. They figured out that they had seen the following:

- 14 Sting Rays
- 8 Dolphins
- 16 Sharks
- 23 Sea Horses
- 19 Penguins
- 35 Jelly Fish



A) Complete the table to show how many of the different combinations of animals Mrs. Gramzinkski's students saw.

Sting Rays	+	**Dolphins**	=	
Sharks	+	**Jelly Fish**	=	
Penguins	+	**Sting Rays**	=	
Sea Horses	+	**Sharks**	=	
Dolphins	+	**Penguins**	=	
Jelly Fish	+	**Sea Horses**	=	

CHALLENGE:

Mrs. Gramzinkis's students also saw a lot of tropical fish. They figured out that they saw 77 different types of fish besides the ones in the table on the previous page.

B) Which is the larger of the two numbers? The number of tropical fish or the total of the 6 types of animals that are included in the table?

REMEMBER to show how you know your answers are correct.

Entering Grade 2: Number and Operations in Base Ten, Activity A

Directions: Read through the following problem and answer the questions. Use the space on the back of this page to complete your work. You may work with a parent, older brother or sister, or friend, but you must show all of your ideas in words, pictures or symbols to completely answer the questions.

Jaylon spilled a container of star stickers on the floor.

A) How many groups of 10 star stickers are there on the floor?

B) How many stickers are left over?

C) What is the total number of stickers that were spilled on the floor?

D) Show how using base ten blocks helps you to model your answer.

CHALLENGE:

E) If, Jaylon wanted to have a total of 80 star stickers, how many more does he need?

REMEMBER to show how you know your answers are correct.

Entering Grade 2: Number and Operations in Base Ten, Activity B

Directions: Read through the following problem and answer the questions. Use the space on the back of this page to complete your work. You may work with a parent, older brother or sister, or friend, but you must show all of your ideas in words, pictures or symbols to completely answer the questions.

Roberta has 100 candy treats. For her 11th birthday party, she wants to make goody bags for her guests with 11

A) How many goody bags can she make with 100 pieces of candy?

CHALLENGE:

Roberta has invited 12 friends to her party.

B) How many more piece of candy does she need to make a goody bag for

REMEMBER to show how you know your answers are correct.

Entering Grade 2: Number and Operations in Base Ten, Activity C

Directions: Read through the following problem and answer the questions. Use the space on the back of this page to complete your work. You may work with a parent, older brother or sister, or friend, but you must show all of your ideas in words, pictures or symbols to completely answer the questions.

A bottle of water weighs 500 grams. The water in the bottle weighs 480 grams

A) How much does the bottle weight?

B) If a scale holding empty bottles shows a total weight of 120 grams, how many bottles are on the scale?

C) How many grams of water would you need to fill all of the bottles on the scale?

CHALLENGE:

On another scale there are more bottles some are filled with water and some are empty. The scale says the total weight is 1,580 grams. The scale has room for as many as 10 bottles.

D) How many bottles are on the scale? Explain how you know.

Entering Grade 2: Measurement and Data, Activity A

Directions: Read through the following problem and answer the questions. Use the space on the back of this page to complete your work. You may work with a parent, older brother or sister, or friend, but you must show all of your ideas in words, pictures or symbols to completely answer the questions.

For this activity you will need to choose three objects that are different sizes, but not too big. You could choose a penny, a paper clip, a nail, a button, a pencil or even a toothpick. The three objects need to fit within the boxes below. What you have chosen them, trace in the appropriate box below and label each.

Smallest object #1 is a _____

Medium size object #2 is a _____

Largest object #3 is a _____

Now you are going to use these objects to measure two additional things in your home, and complete the **Data Chart** on the back of this page.

Measurement Data Chart

	Item #1 is a: _____	Item #2 is a: _____
Smallest object #1		
Medium size object #2		
Largest object #3		

A) Explain how you used the objects to figure out the length of the two items you chose. You want to explain carefully, so someone else will be able to measure the items in the same way that you did.

CHALLENGE:

B) Which one of your three objects would you choose to measure the width of your bed? Explain why the object you chose is the best one to use to measure the width of your bed.

REMEMBER to show how you know your answers are correct.

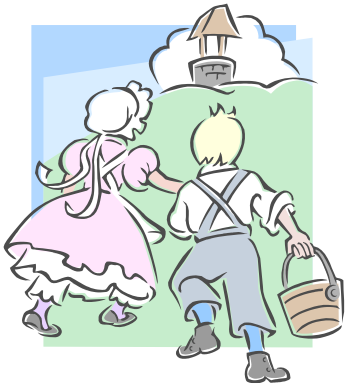
This page is Blank

(mostly)

Entering Grade 2: Measurement and Data, Activity B

Directions: Read through the following problem and answer the questions. Use the space on the back of this page to complete your work. You may work with a parent, older brother or sister, or friend, but you must show all of your ideas in words, pictures or symbols to completely answer the questions.

Read the nursery rhyme below.



Jack and Jill

went up a hill

to fetch a pail of water.

Jack fell down

and broke his crown,

and Jill came tumbling after.

Use tally marks to complete the data chart below.

Length of Words by the Number of Letters in the Word

Fewer and three letters	
Three Letters	
Four Letters	
Five Letters	
More than five letters	

Now answer the questions on the other side of this paper.

A) What length of word is used the most in this nursery rhyme?

B) What length of word is used least?

CHALLENGE:

Pick a short rhyme or poem of your own and copy it into the space below.

C) Complete the same table as before using the nursery rhyme or poem that you chose.

Length of Words by the Number of Letters in the Word

Fewer and three letters	
Three Letters	
Four Letters	
Five Letters	
More than five letters	

Now answer the questions on the other side of this paper.

C) What length of word is used the most in this nursery rhyme?

D) What length of word is used least?

E) Write a sentence comparing the data from Jack and Jill with the data from your nursery rhyme or poem.

This page is also Blank

Entering Grade 2: Measurement and Data, Activity C

Directions: Read through the following problem and answer the questions. Use the space on the back of this page to complete your work. You may work with a parent, older brother or sister, or friend, but you must show all of your ideas in words, pictures or symbols to completely answer the questions.

In the world of Telltimeia, the people live very carefully scheduled lives. Whenever they do something, they do it for an amount of time that can be broken down into 30 minute parts. Below are a list of things that one of its citizens, a Miss Esmeralda Altadonna, did on a recent Saturday. Read through and place the events in a sensible order.

Get Up and Get Dressed for the Day 30 minutes	Play in a Soccer Tournament 2 hours
See a Movie at the Cineplex 2 hours	Go for a Walk with her Dog 1 hour 30 minutes
Read a Book about a Mystery 1 hour	Make Sandwiches for Lunch 30 minutes
Bake a Cake for her Mother's Birthday 1 hour	Make and eat Dinner with her Family 1 hour
Have Breakfast with her Family 30 minutes	Get ready for Bed 30 minutes
Help her Dad in the Garden 1 hour	Talk to her Grandparents on the Phone 30 minutes

Use the order that you have created for Esmeralda's day to answer the following questions.

1. If Esmeralda woke up at 8:00 AM, at what time in the day did she do the following things? What time did she:

- Bake her mother's birthday cake? _____
- Take her dog for a walk? _____
- Have her lunch? _____
- Talk to her grandparents on the phone? _____
- Get ready for bed? _____

2. If her soccer tournament started at 1 PM, at what time did she do the following things? What time did she:

- Have her dinner with her family? _____
- See a movie at the Cineplex? _____
- Help her dad in the garden? _____
- Read her book? _____
- Wake up in the morning? _____

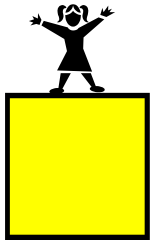
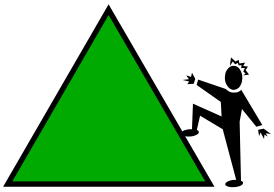
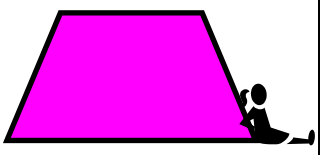
CHALLENGE

Write down the events from one of your days over the summer and create a schedule where everything would take place in blocks of 30 minutes, whole hours, or a combination of the two time amounts.

Entering Grade 2: Geometry, Activity A

Directions: Read through the following problem and answer the questions. Use the space on the back of this page to complete your work. You may work with a parent, older brother or sister, or friend, but you must show all of your ideas in words, pictures or symbols to completely answer the questions.

Match the following shapes to an object in your home. Tell how each shape is like the object that you chose.

The Shape	Your Object	How are they alike?
		
		
		

CHALLENGE:

Choose one of the shapes and draw it using a ruler in the space below

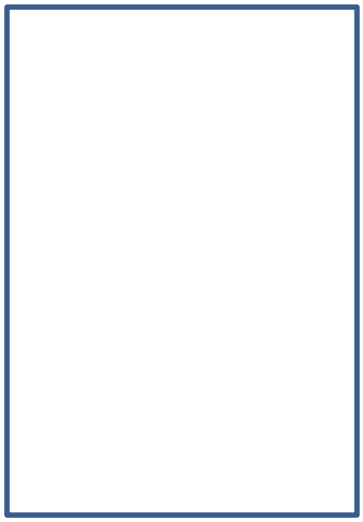
List as many objects as you can that are the same shape (at least 10, please).

Entering Grade 2: Geometry, Activity B

Directions: Read through the following problem and answer the questions. Use the space on the back of this page to complete your work. You may work with a parent, older brother or sister, or friend, but you must show all of your ideas in words, pictures or symbols to completely answer the questions.

For this activity use the sheet of paper on the back of this packet labeled “folding sheet”. The shape that a piece of paper makes is called a rectangle. Take the rectangle piece of paper and fold into 4 equal parts.

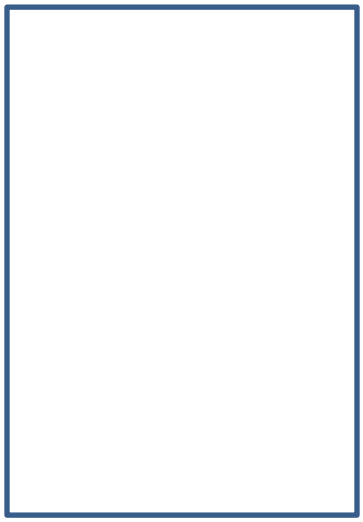
A) Use a pencil and a ruler to draw lines in the rectangle below to that show how you folded your paper to get 4 equal parts.



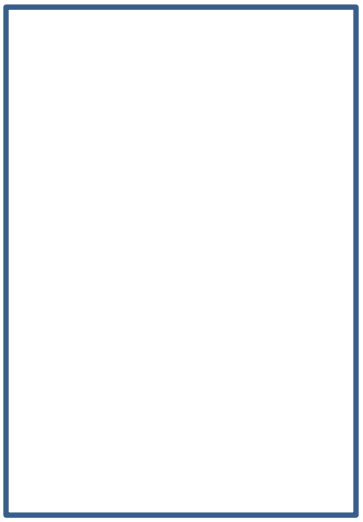
First Example

B) Can you think of three more ways to fold the paper in 4 equal portions that are different from each other?

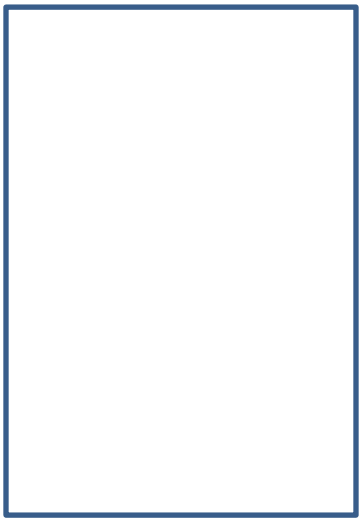
C) Use the rectangles on the back of this page to record as many as you can.



Second Example



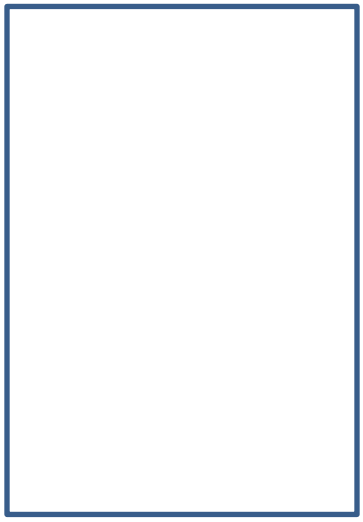
Third Example



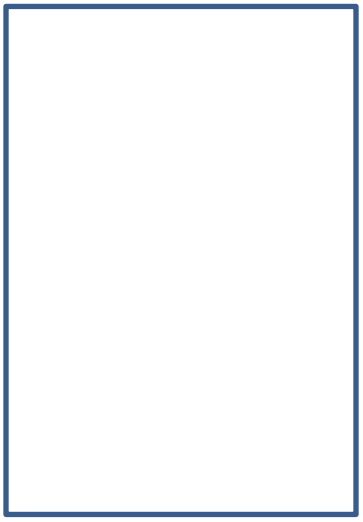
Fourth Example

CHALLENGE:

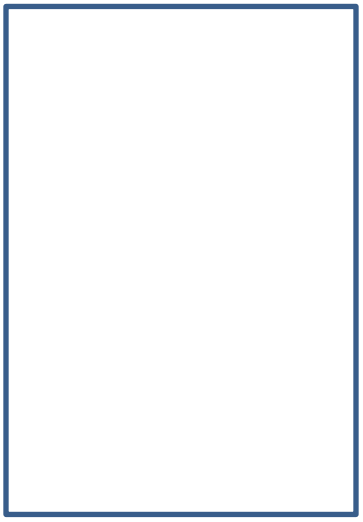
D) How many ways can you fold the paper into three equal parts? Use additional paper, if you need to.



First Example



Second Example



Third Example

Folding Sheet

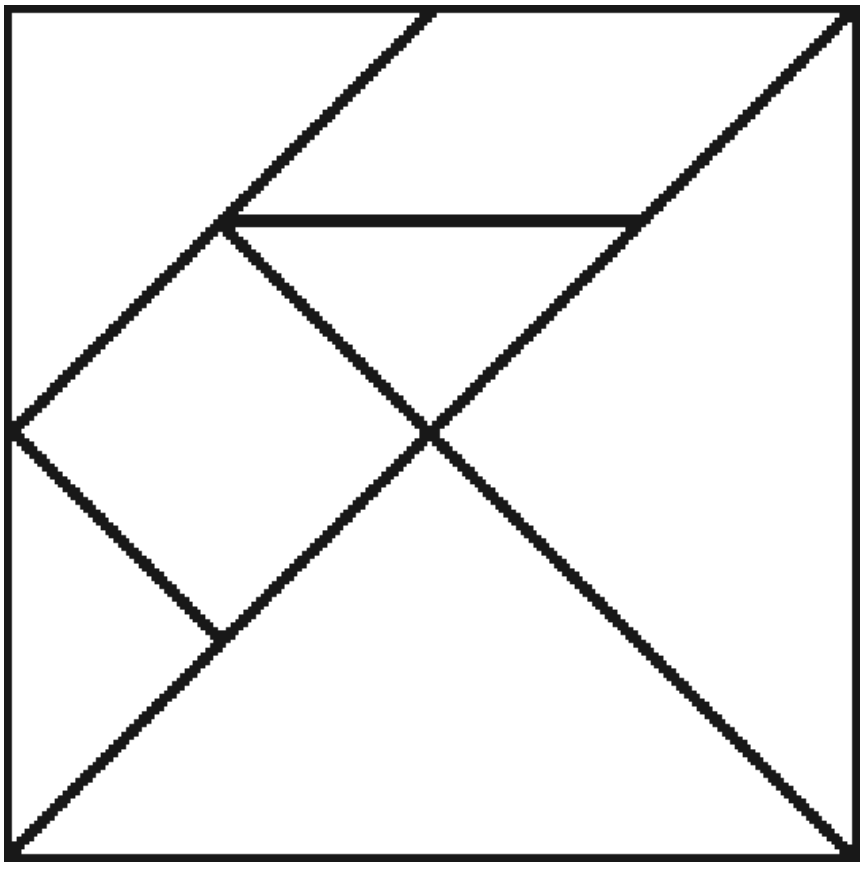
This page is also Blank

Entering Grade 2: Geometry, Activity C

Directions: Read through the following problem and answer the questions. Use the space on the back of this page to complete your work. You may work with a parent, older brother or sister, or friend, but you must show all of your ideas in words, pictures or symbols to completely answer the questions.

For this activity you will want to cut out the pieces of the tangram below. Assemble and record the following:

- How many different triangles can you make using three of the shapes?
- How many different triangles can you make using four of the shapes?
- How many different ways can you make a square?
- How many different sizes of squares can you make?
- What is the greatest number of sides on a shape that you can make using four of the shapes?
- What is the least number of sides on a shape that you can make using five of the shapes?



This page is the last Blank page!