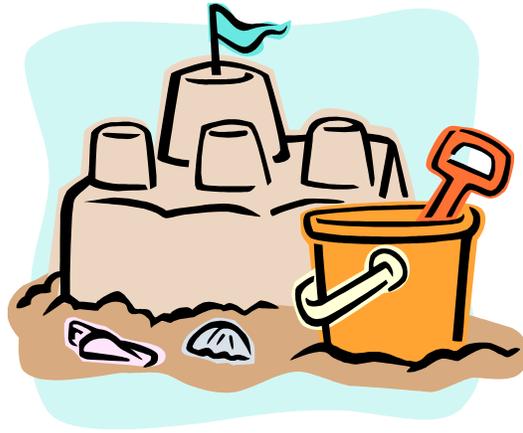




MATH PACKET



for

Students Entering the **Third Grade**

To receive credit, please have your parent help you fill out the verification form below.
https://docs.google.com/forms/d/1jVQK7S0EDz8poxS3LwW3xvv5zikCLwIVXI5tsTa0LRw/viewform?usp=send_form

INTRODUCTION

Welcome to the summer math packet for students entering Third 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 Third Grade, students will explore math concepts based on five standards. The ten activities in this summer math packet reflect the content of those five standards.

EXPECTATION

To receive credit for this packet, students must **complete at least eight** of the activities with at least one being from each of the five standards.

Summer Packet Content:

Standard 1: Operations and Algebraic Thinking

Standard 2: Number and Operations in Base Ten

Standard 3: Number and Operations—Fractions

Standard 4: Measurement and Data

Standard 5: Geometry

To obtain credit for your hard work, have your parents fill out the verification form using the link on the cover page!

The form must be completed by the third Friday of September!

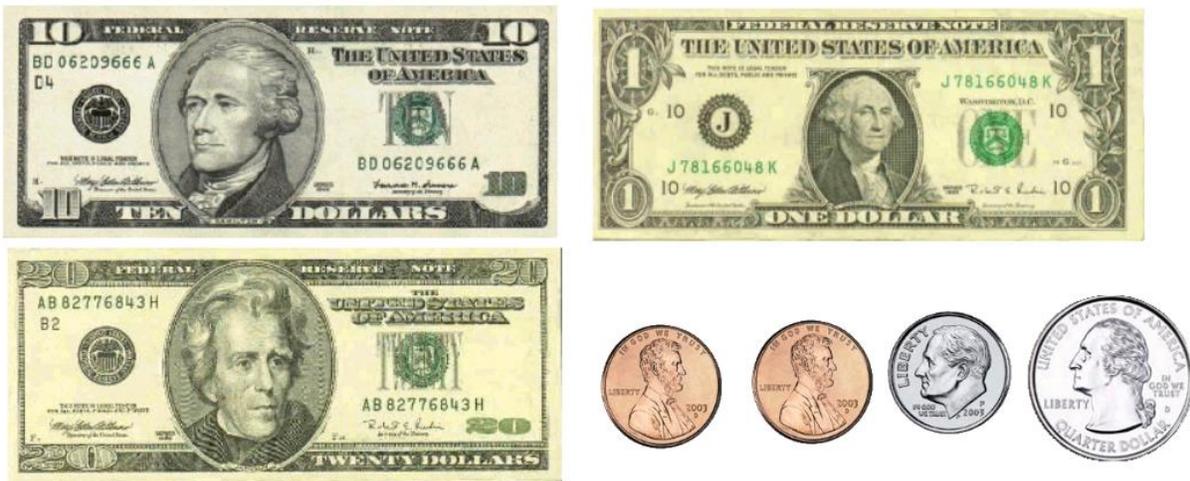
Measurement and Data:

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.

Preetam has this much money:



Tyreek has this much money:



A) Who has more money?

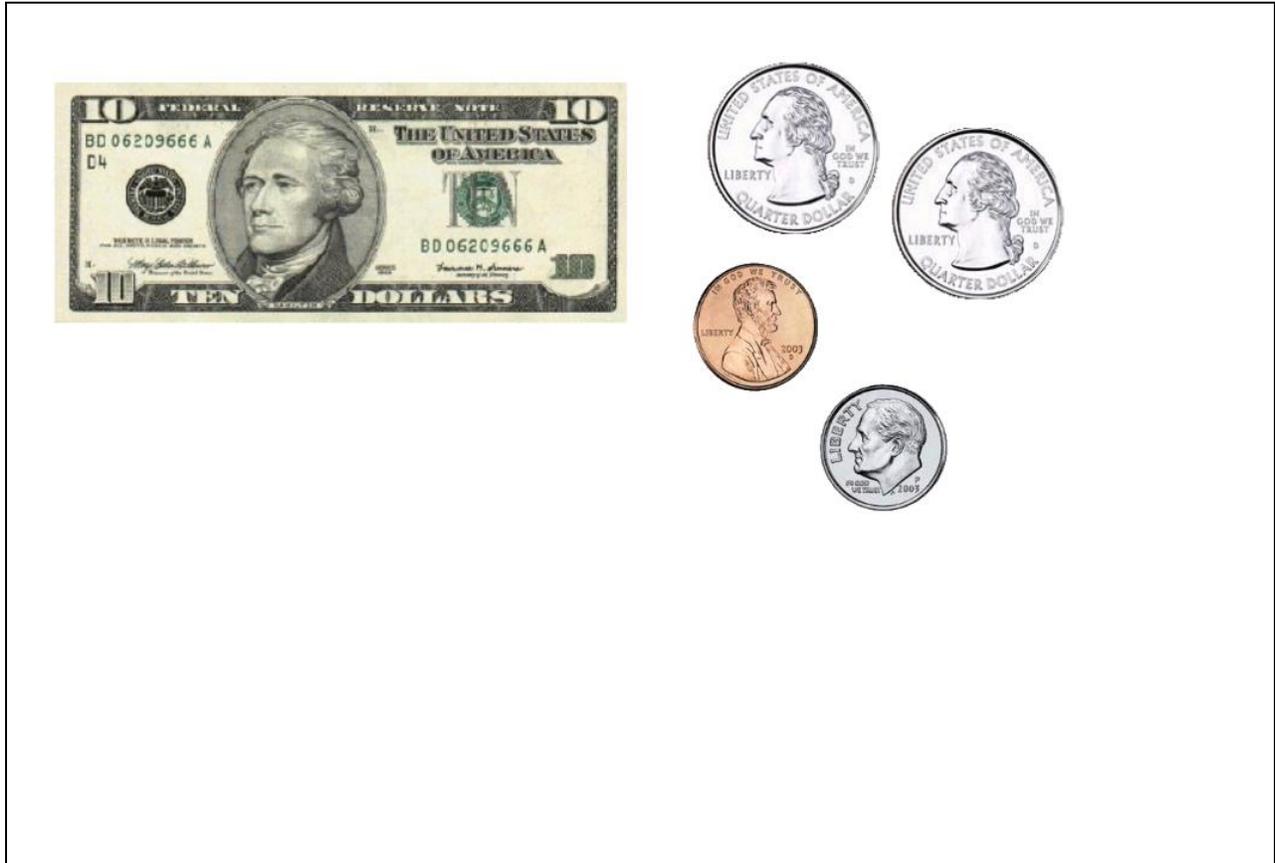
B) How do you know?

REMEMBER to show how you know your answers are correct.

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CHALLENGE:

- c) Add coins and bills to the amount already shown to find an amount that is *between* what Preetam and Tyreek have. Use Q, D, N, and P to represent the coins if you choose to draw a picture.



- D) Show the amount you represented above in a different way.

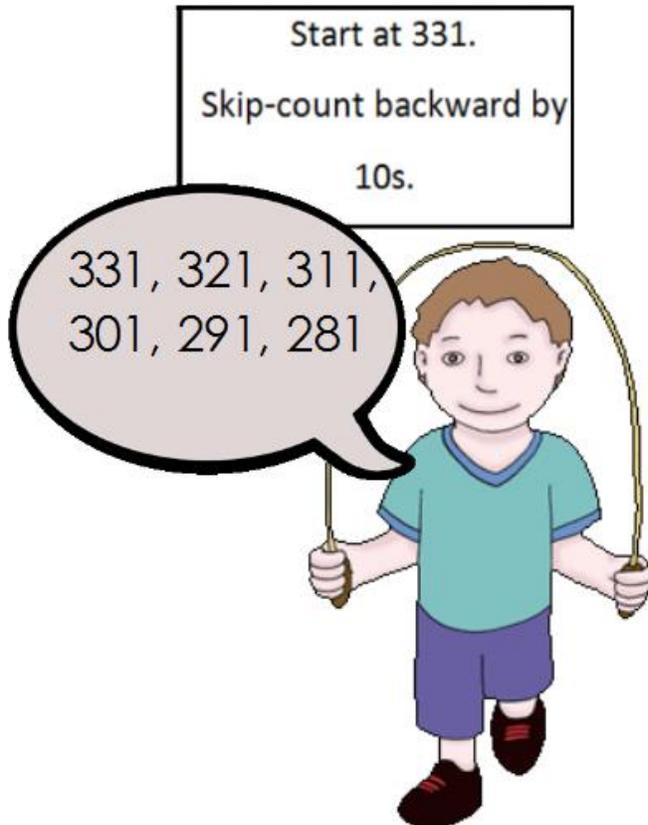


Number and Operations in Base Ten:

Directions: Read through the following directions. You may work with a parent, older brother or sister, or friend. Include a completed score card to show that you participated in this activity.

Skip Counting Game

Ask an adult or older sibling to play with you. Cut out the cards and place them face down. Take turns drawing a card and skip-counting according to the directions. Each player must extend the skip-counting pattern by 5 more places. Here is an example...



The last number becomes a player's score. For example, this player should write down a score of "281" on the score sheet. The game is over when all the cards are gone. Use a calculator to total each player's score.

Go to <http://number-chart.herokuapp.com/> for an interactive thousands chart if you need help!

Score Card

Player 1	Player 2

To play this game again, create your own score card on a sheet of lined paper.

Start at 92. Skip-count forward by 10s.	Start at 931. Skip-count backward by 10s.
Start at 42. Skip-count forward by 100s.	Start at 667. Skip-count backward by 100s.
Start at 329. Skip-count forward by 10s.	Start at 331. Skip-count backward by 10s.
Start at 28. Skip-count forward by 100s.	Start at 770. Skip-count backward by 100s.
Start at 556. Skip-count forward by 10s.	Start at 101. Skip-count backward by 10s.

Start at 43. Skip-count forward by 10s.	Start at 221. Skip-count backward by 10s.
Start at 15. Skip-count forward by 100s.	Start at 703. Skip-count backward by 100s.
Start at 104. Skip-count forward by 10s.	Start at 800. Skip-count backward by 10s.
Start at 12. Skip-count forward by 100s.	Start at 679. Skip-count backward by 100s.
Start at 224. Skip-count forward by 10s.	Start at 339. Skip-count backward by 10s.

Operations and Algebraic Thinking:

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.

You are spending July Fourth, Independence Day, in Ocean City. There is a shuttle that takes people from your hotel to the fireworks display. There are 64 people waiting in line for the shuttle. The driver lets people on and the shuttle leaves. There are still 24 people standing in line waiting for the next shuttle.

- A) How many people left on the first shuttle?
- B) Write an equation that represents the problem situation below.
- C) Use a “?” to represent the unknown number in the problem.
- D) Solve the equation.



CHALLENGE:

The shuttles only leave when they are full.

- E) How many more people must get in line to fill the second shuttle?

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Jillian has 17 pencils. Juan has 35 pencils. How many fewer does Jillian have?

Jessica says this is an addition problem. Hector disagrees and says this is a subtraction problem.

A) Explain each child's thinking.



CHALLENGE:

B) Which way of thinking about this problem makes the most sense to you? Explain your choice.

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Number and Operations in Base Ten:

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You have just completed some practice activities in math this summer. Your aunt is visiting for the week and spilled her coffee on portions of your work. Fill in the places where the coffee has covered the work you completed.



- A) Find the missing digit in each equation. Use numbers, pictures, or words to show how you figured out the missing digit.

$$\begin{array}{r} 616 \\ - 228 \\ \hline \text{X}88 \end{array}$$

$$\begin{array}{r} 3\text{X}6 \\ + 293 \\ \hline 619 \end{array}$$

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CHALLENGE:

Oh, no! Your aunt spilled coffee on **two** numbers. You remember that one was 56 and the other number was a 24. However you don't recall the order of the numbers.



$$63 + 33 + \text{☒} + \text{☒} = \underline{\hspace{2cm}}$$

B) Solve this problem. Use numbers, pictures, or words to show your written method. (You may use the attached place value models if you wish.)

$$63 + 33 + 24 + 56 = \underline{\hspace{2cm}}$$

C) Now, look at the equation below. Explain why the sum is the same as in the problem above. (You may use the attached place value models if you wish.)

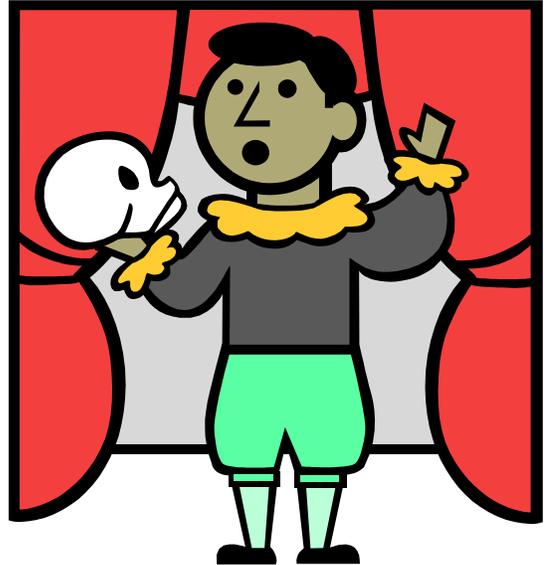
$$63 + 33 + 56 + 24 = \underline{\hspace{2cm}}$$

Operations and Algebraic Thinking:

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.

Brittany was helping Mrs. Smith set up chairs in the all-purpose room for a performance of her class play. They needed to seat 60 parents. Mrs. Smith wanted to put the same number of chairs in each row.

After thinking about Mrs. Smith's plan, Brittany suggested a different arrangement for the same number of seats. She explained that, by putting 5 more chairs in each row, they could have 2 fewer rows, and parents in the back row would be able to see better.



- A) How many chairs were in each row of Brittany's plan? Explain how you solved the problem in the space on the back of this page.

CHALLENGE:

- B) Write a similar problem involving two possible sets of rows and seats per row for 180 students. Show a solution for your problem.

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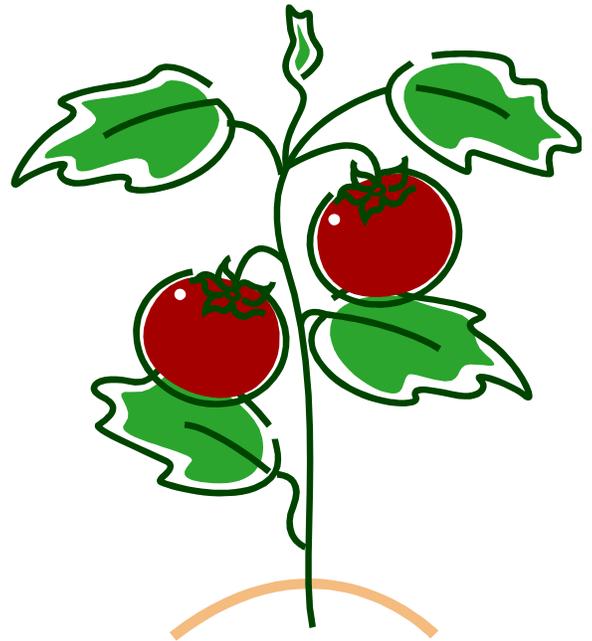
Operations and Algebraic Thinking:

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David and Kyle were both given a plot of land at their local community garden. David was going to plant 32 tomato plants and Kyle had planned to plant 24 tomato plants. Each boy want to plant their tomatoes in rows that had the same number of plants in each row and both had decided that their design had to have at least 2 rows, but could have more.

The boys like to compete against each other, and David said that he had more ways that he could plant his tomatoes than Kyle.

- A) Was he correct? Explain how you determined your answer on the back of this page.



CHALLENGE:

Take the boy with few options and help him do the following.

- B) Add just enough plants to have the same number of options as his friend.
- C) Add just enough plants to have more options than his friend.

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Number and Operations Base Ten:

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Annika bought the following at the Tropical Fish store.

Her receipt was torn and so she couldn't see the total.

Her father said, that must have cost you about \$16.00 dollars.

- A) Was her father's statement reasonable?
- B) Explain your thinking carefully on the back of this page.

Tropical Fish Store	
September 12, 2011	
1 Beta (male).	@2.99
2 Angel Fish.	@5.98
3 Zebra Fish.	@6.47
1 Algae Feeder.	@3.29

CHALLENGE:

If you include Maryland state sales tax to the total (\$0.06 for every dollar) about how much did Annika pay in taxes on the fish she bought?



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Measurement and Data:

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Deana and Rebecca just discovered that they were born in the same month at the same hospital.

Deana was born on September 3rd at 4:30 PM, and Rebecca was born on September 14th at 11:15 AM.

- A) How many days older is Deana than Rebecca?
- B) How many hours older?



CHALLENGE:

- C) Explain what you would do to figure out how many seconds older.

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Entering Grade 3: 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.

A year ago Simone planted a vegetable garden with the dimensions of 2 feet by 15 feet.

This past summer she moved to a new home and her new yard had a different shape. So she made a new garden with the dimensions of 6 feet by 7 feet.

- A) Which of her gardens is larger?

CHALLENGE:

- B) If she wanted to make her new garden the same size as her old garden, but her new yard is only 14 feet by 14 feet, what other possibilities could she use? She wants all of her gardens to look like rectangles.



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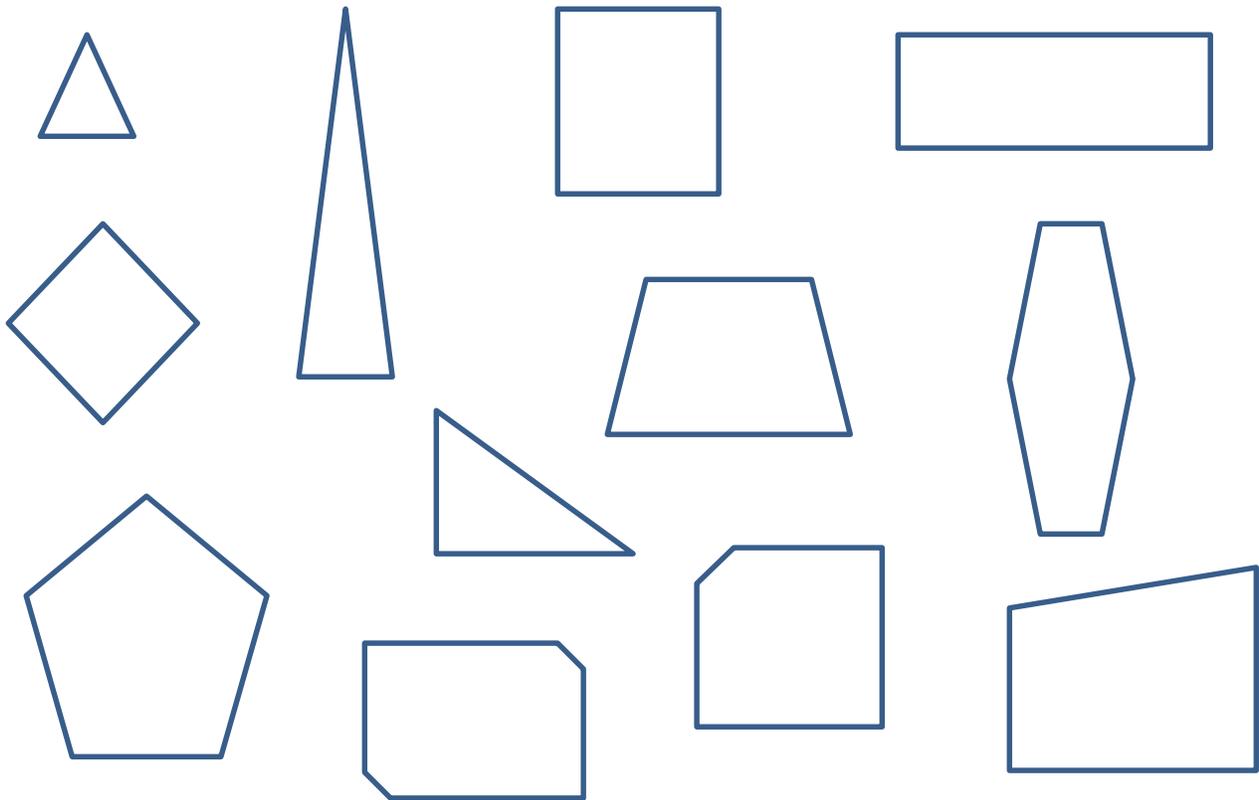
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Entering Grade 3: Geometry, Activity A

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.

Look at the shapes below.

A) Choose two completely different ways to divide the shapes into two categories.



CHALLENGE:

Study the shapes carefully.

B) Describe the attribute that you think is true for the greatest number of the shapes. It may be true for all or just most of the shapes, but it should be something that the majority of shapes has in common.

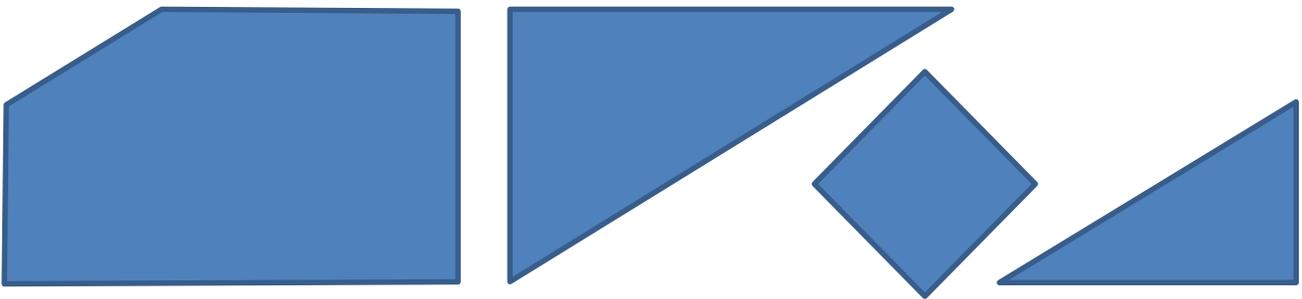
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Entering Grade 3: Geometry, Activity B

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.

Trace the four shapes below and cut them out. Be as accurate as you can so that your answers will be easier to discover.



One of the shapes does not belong. There is only one way to figure out which shape it is. Three of the shapes can be rearranged to form both a square and a rectangle. These are the magic shapes. The fourth shape will be left over.

A) Explore ways to combine the shapes to discover the three magic shapes.

CHALLENGE:

B) Using just the three magic shapes, is it possible to create other kinds of quadrilaterals (four-sided) shapes, and if so, what would they look like?

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