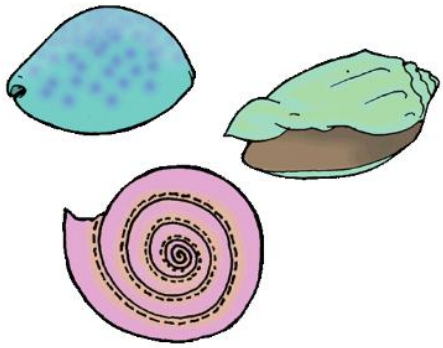
MATH PACKET



for

Students Entering the **Fourth Grade**

Students Name: _____
First and Last

Student's **Fourth** Grade Teacher: _____

Parent's Signature: _____

INTRODUCTION

Welcome to the summer math packet for students entering fourth grade. Activities are designed to support instruction in the new curriculum in both its content and presentation. Activities may be done independently or with a parent, guardian or older brother or sister. Talking about the problem can be an important part of completing some activities.

How Wayside's Summer Math Program Works:

- Students set their own goals for completing math activities.
- Students use the math packet to complete and record responses for the activities.
- Summer Math Packet is returned to school during the week of **August 25-August 29**.
- Students completing the Summer Math Packet will:
  -Receive a summer math certificate.
  -Receive recognition on the morning announcements the week of September 2nd.
  -Receive a popsicle during a selected lunch time.

Summer Packet Content:

Standard 1: Operations and Algebraic Thinking

- Activity A: All Purpose Seating Plan
- Activity B: Multiplication Beach Towel Table

Standard 2: Number and Operations in Base Ten

- Activity A: Cars Per Hour
- Activity B: Decompose or Compose

Standard 3: Number and Operations—Fractions

- Activity A: "Whole" in One Miniature Golf
- Activity B: Fraction Concentration

Standard 4: Measurement and Data

- Activity A: Summer Music Festival
- Activity B: Vegetable Garden

Standard 5: Geometry

- Activity A: Categories
- Activity B: Quadrilaterals

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!

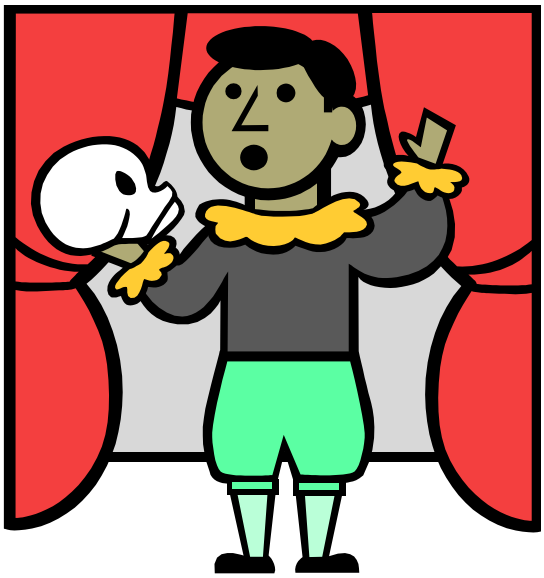
Sincerely,

Mrs. Donna Michela, Principal
Mr. Aaron King, Staff Development Teacher

Review of Grade 3: Operations and Algebraic Thinking, Activity A

All Purpose Seating

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.

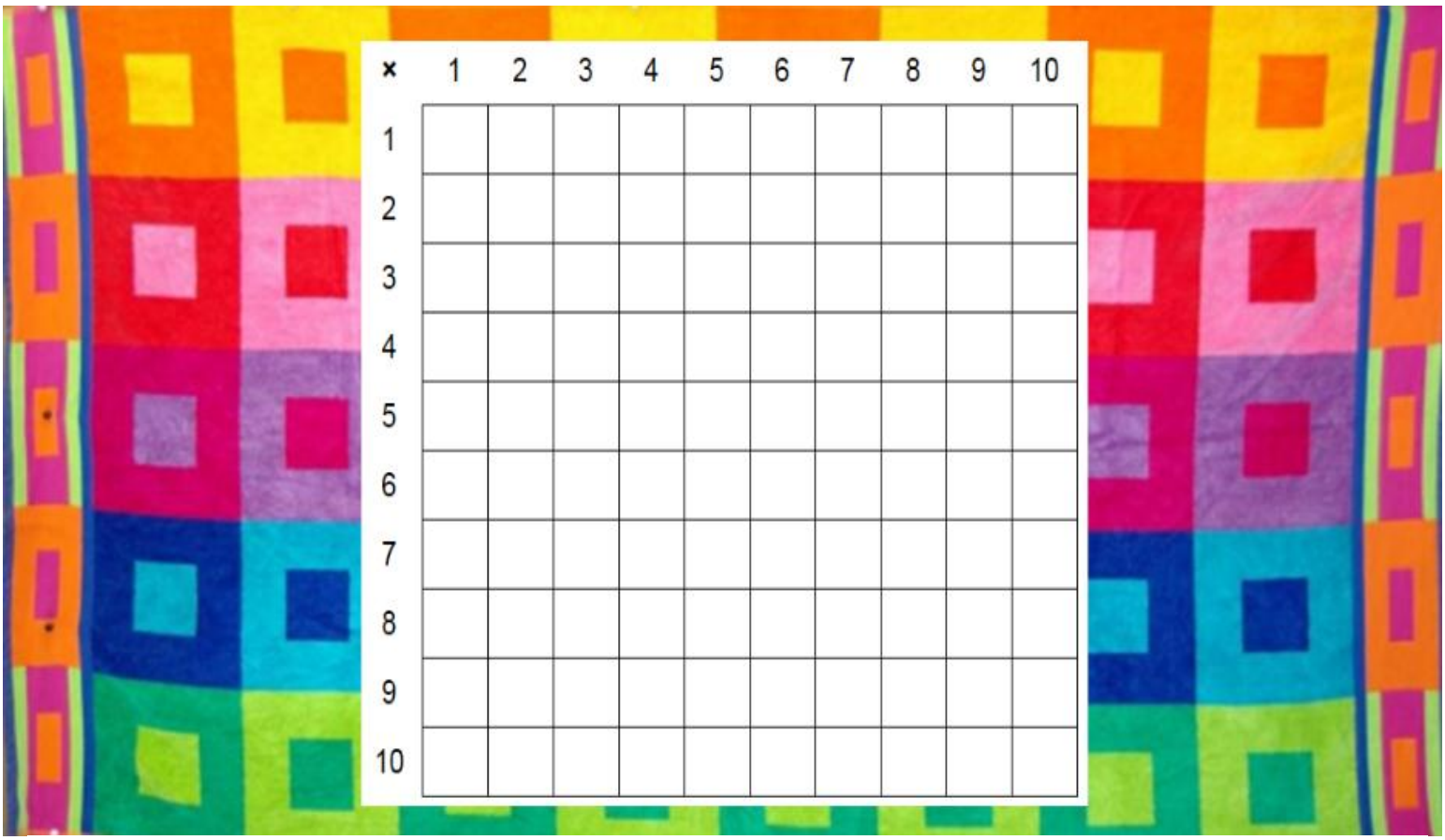
REMEMBER to show how you know your answers are correct.

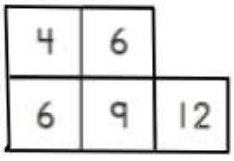
Review of Grade 3: Operations and Algebraic Thinking, Activity B

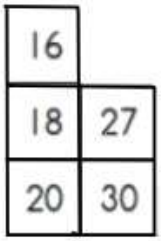
Multiplication Beach Towel Table

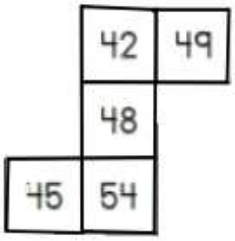
Directions: Read through the following problem and answer the questions. You may work with a parent, older brother or sister, or friend, but you must show all of your ideas in words, pictures or symbols to completely answer the questions.

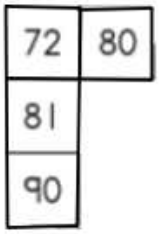
Your family bought you a beach towel for your trip to Ocean City. The towel is a blank multiplication table. After a long swim in the ocean, you decide to take a break. Cut and correctly glue the multiplication puzzle pieces on the towel. Explain your thinking in the box on the next page

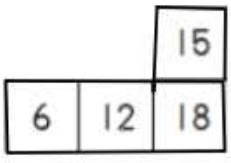


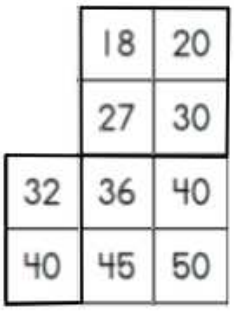












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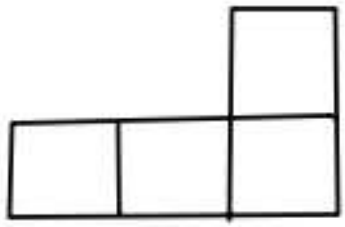
What was your thinking? What strategies did you use to put the pieces on the towel?

Challenge:

Fill in this puzzle piece for a space on the towel that has not yet been filled. Explain your thinking.



Review of Grade 3: Number and Operations Base Ten, Activity A

Cars per Hour

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 new road opened in Montgomery County and the transportation department wanted to see how many people were using it, and what time of the day it was being used the most. A camera was set up to record the number of cars that used the road each hour from 6 AM through 6 PM. The chart shows the data:

Cars per Hour

HOUR	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 noon	1 PM	2 PM	3 PM	4 PM	5 PM
# of Cars	894	966	2,311	732	144	102	463	295	271	346	809	3,043

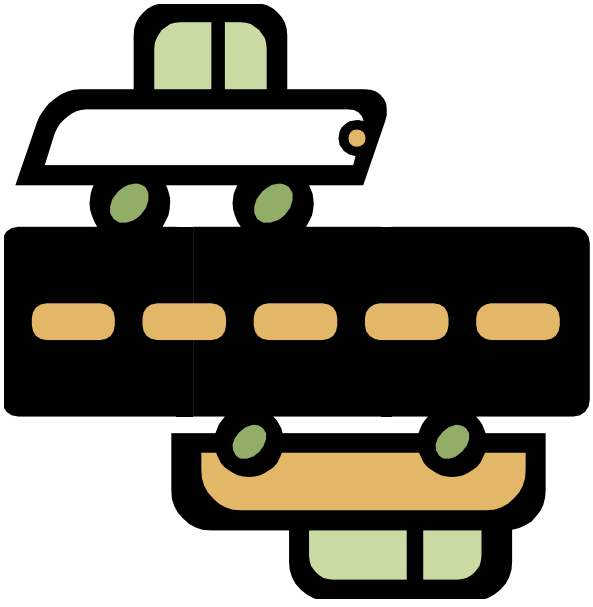
To explain the results quickly, it was decided that an estimation of the total number of cars for the day would be used. The transportation department could either round to the nearest 10 or the nearest 100.

A) Which method should they use and why do you think it is the better choice?

CHALLENGE:

There are two choices for rounding in this problem. Rounding to the nearest 100 or rounding to the nearest 10. One method is faster and one method is more accurate.

B) Explain which method is which and why.

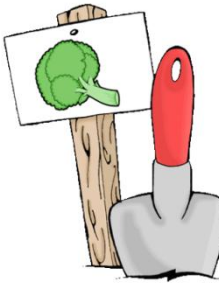


REMEMBER to show how you know your answers are correct.

Review of Grade 3: Number and Operations Base Ten, Activity B

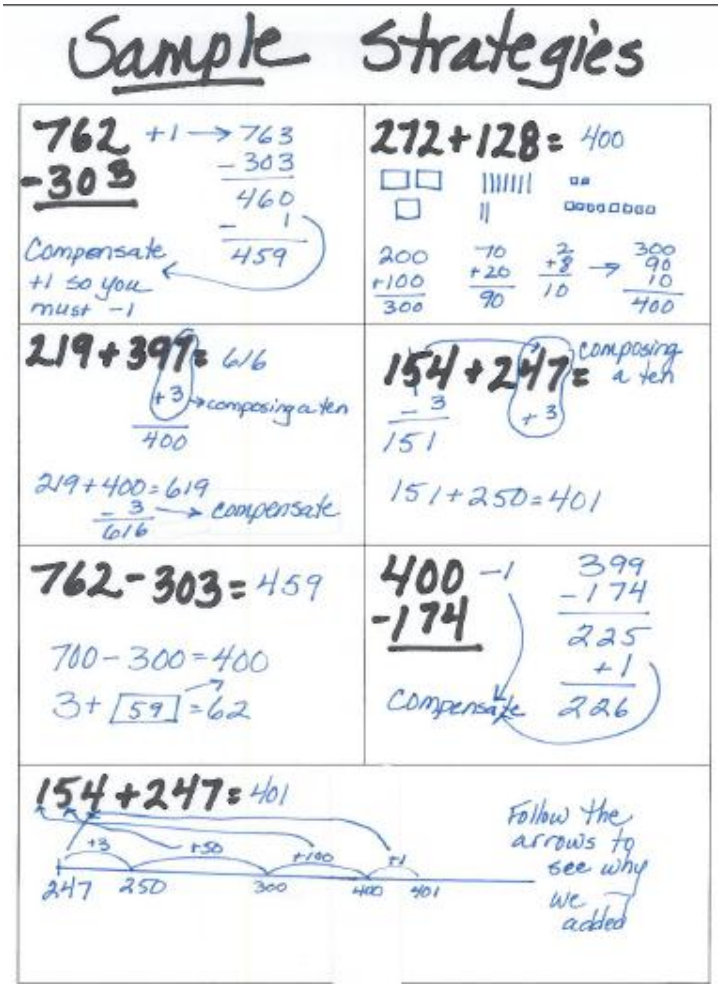
Decompose or Compose

Solve the problems below. Ask yourself…



***Note to parents:

Curriculum 2.0 teaches students a variety of flexible strategies for solving addition and subtraction problems. We no longer use the words "carry or "borrow". Instead, we use "compose and decompose". Please note the **examples** given on the following pages. **Allow your child flexibility** in solving the problems. Have them share their thinking!



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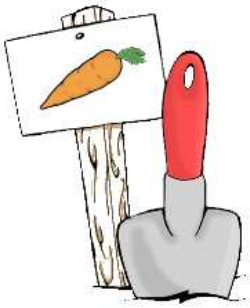
219 + 397 =	154 + 247 =
762 - 303 =	400 -174
154 + 247 =	

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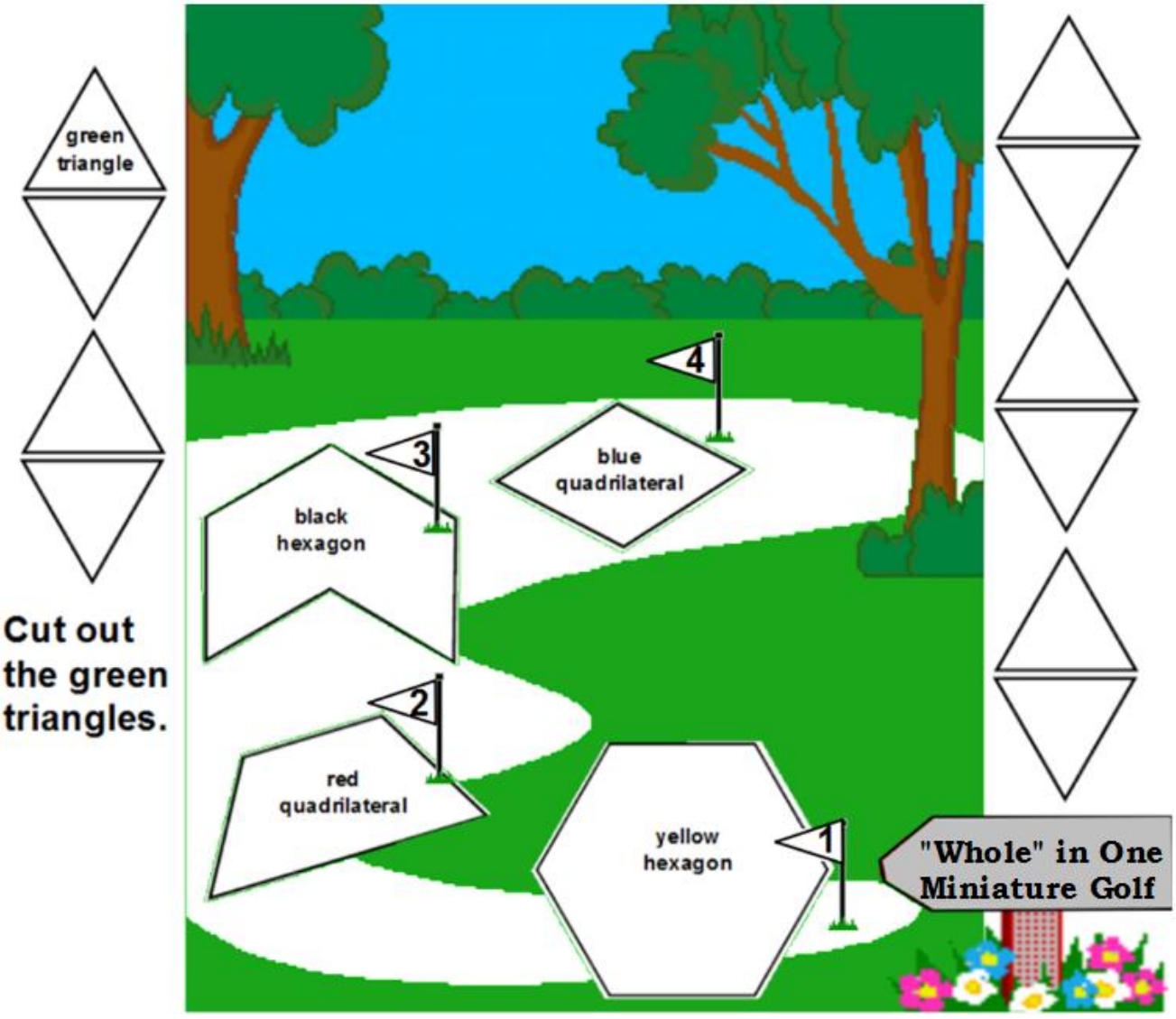
Review of Grade 3: Number and Operations – Fractions, Activity A

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.

"Whole in One Miniature Golf"



Play **Fraction Miniature Golf**. As you move to each "whole", identify the unit fraction that the green triangle represents.

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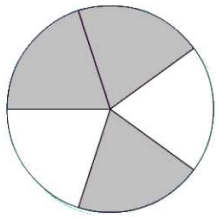
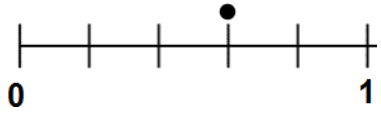
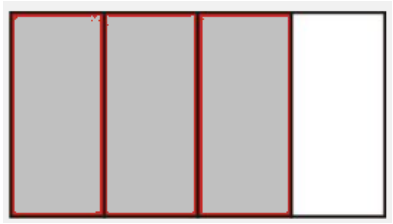
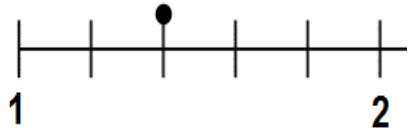
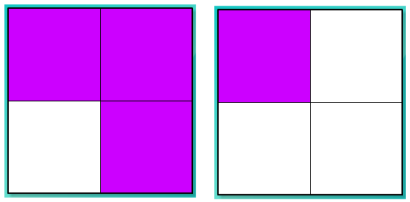
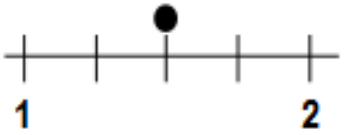
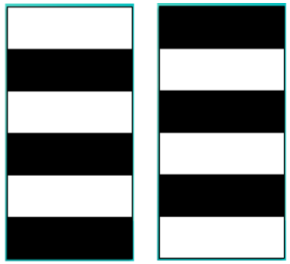
REMEMBER to show how you know your answers are correct for **“Whole” in One Golf.**

Review of Grade 3: Number and Operations – Fractions, Activity B Fraction Concentration

Cut out the cards. Turn them face down. Take turns with a partner turning over two cards at a time to make a match. If your cards don't show the same fraction, turn them over and lose your turn.

$\frac{5}{3}$			$\frac{3}{2}$
$\frac{7}{4}$	$\frac{4}{4}$		1
		$1\frac{3}{4}$	
		$\frac{7}{5}$	

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REMEMBER to show how you know your answers are correct.

Review of Grade 3: 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.

Your family is attending a ***Summer Music Festival*.** There are a number of concerts playing on different stages at the same time. You have been asked to plan the day and make the schedule You need to show the start time and end time at each performance you choose. The length of time your family will stay at each performance is shown in the table below. You can go to ANY performance at ANY time.

The festival begins at 11:00 AM and ends at 6:00 PM. Leave 10 minutes in between each performance to get to the next place and grab a snack if you get hungry.

Performance	Total Time Allowed
Native American Flute Performance	45 minutes
Summer Salsa Music	2 hours
The Real Reggae Band	1 hour, 45 minutes
Celtic Connections	1 hour, 25 minutes
Caribbean Collaboration	30 minutes
Africa Percussion	2 hours, 15 minutes
Chinese Suona Songs	1 hour, 40 minutes
Indian Folk Music	2 hours 10 minutes

Summer Music Festival Schedule

Performance	Beginning Time	Ending Time
	11:00	

REMEMBER to show how you know your answers are correct.

Review of Grade 3: Measurement and Data, Activity B

Vegetable Garden

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.

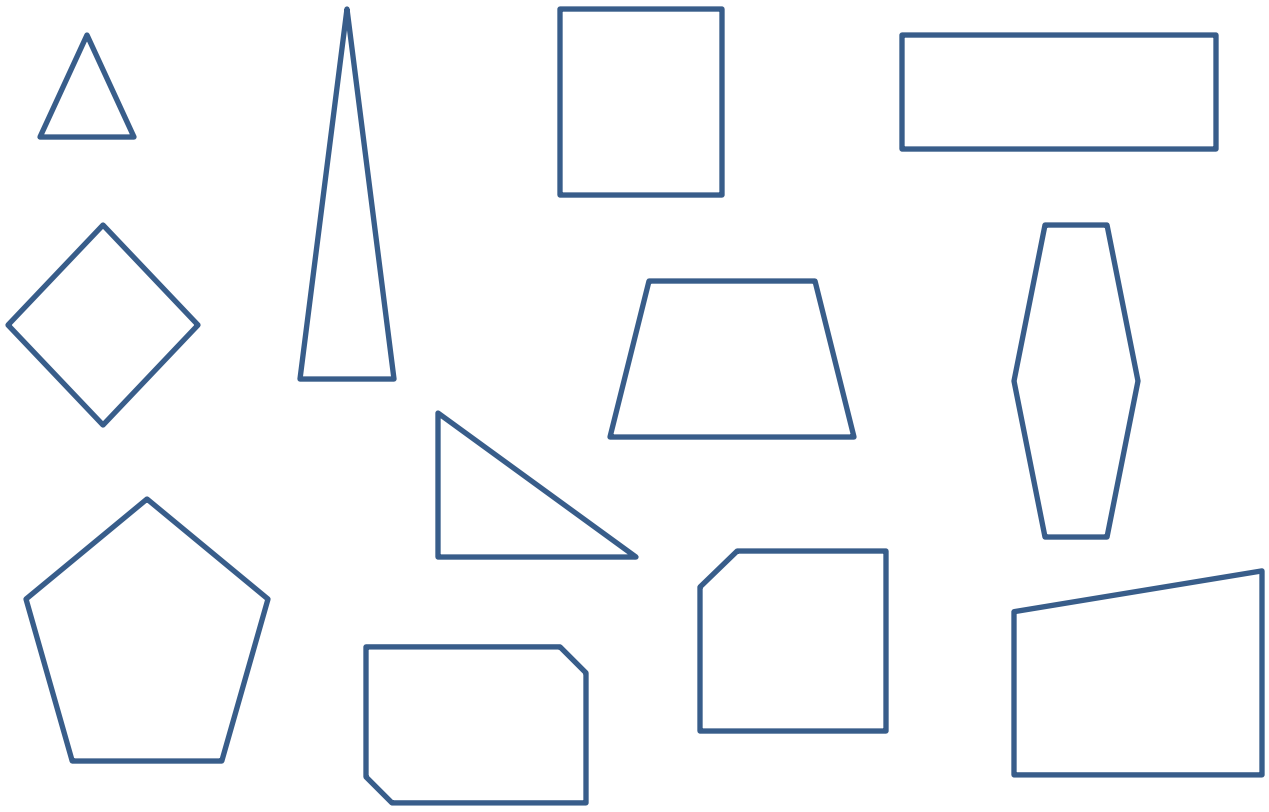
REMEMBER to show how you know your answers are correct.

Review of Grade 3: Geometry, Activity A Categories

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.

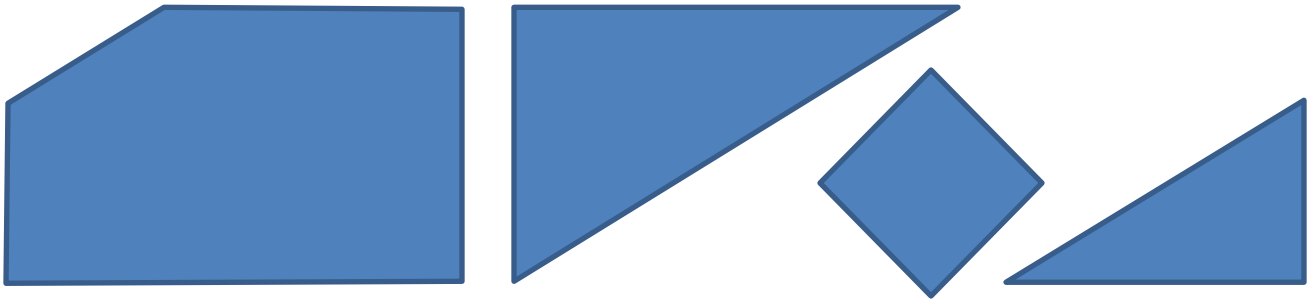
B) Describe the attribute that you think is true for the greatest number of the shapes. It may be true for all or just most of the shapes, but it should be something that the majority of shapes has in common.

REMEMBER to show how you know your answers are correct.

Review of Grade 3: Geometry, Activity B Quadrilaterals

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?

REMEMBER to show how you know your answers are correct.

$\begin{array}{r} 2 \\ \times 2 \\ \hline \end{array}$	$\begin{array}{r} 1 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} 1 \\ \times 4 \\ \hline \end{array}$	$\begin{array}{r} 1 \\ \times 0 \\ \hline \end{array}$
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$\begin{array}{r} 2 \\ \times 4 \\ \hline \end{array}$	$\begin{array}{r} 2 \\ \times 0 \\ \hline \end{array}$	$\begin{array}{r} 1 \\ \times 6 \\ \hline \end{array}$	$\begin{array}{r} 1 \\ \times 2 \\ \hline \end{array}$
$\begin{array}{r} 2 \\ \times 5 \\ \hline \end{array}$	$\begin{array}{r} 2 \\ \times 1 \\ \hline \end{array}$	$\begin{array}{r} 1 \\ \times 7 \\ \hline \end{array}$	$\begin{array}{r} 1 \\ \times 3 \\ \hline \end{array}$

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4 x2	4 x3	4 x4	4 x5
4 x6	4 x7	4 x8	4 x9
5 x0	5 x1	5 x2	5 x3
5 x4	5 x5	5 x6	5 x7

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7×0	6×6	6×2	5×8
7×1	6×7	6×3	5×9
7×2	6×8	6×4	6×0
7×3	6×9	6×5	6×1

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7 x4	7 x5	7 x6	7 x7
7 x8	7 x9	8 x0	8 x1
8 x2	8 x3	8 x4	8 x5
8 x6	8 x7	8 x8	8 x9

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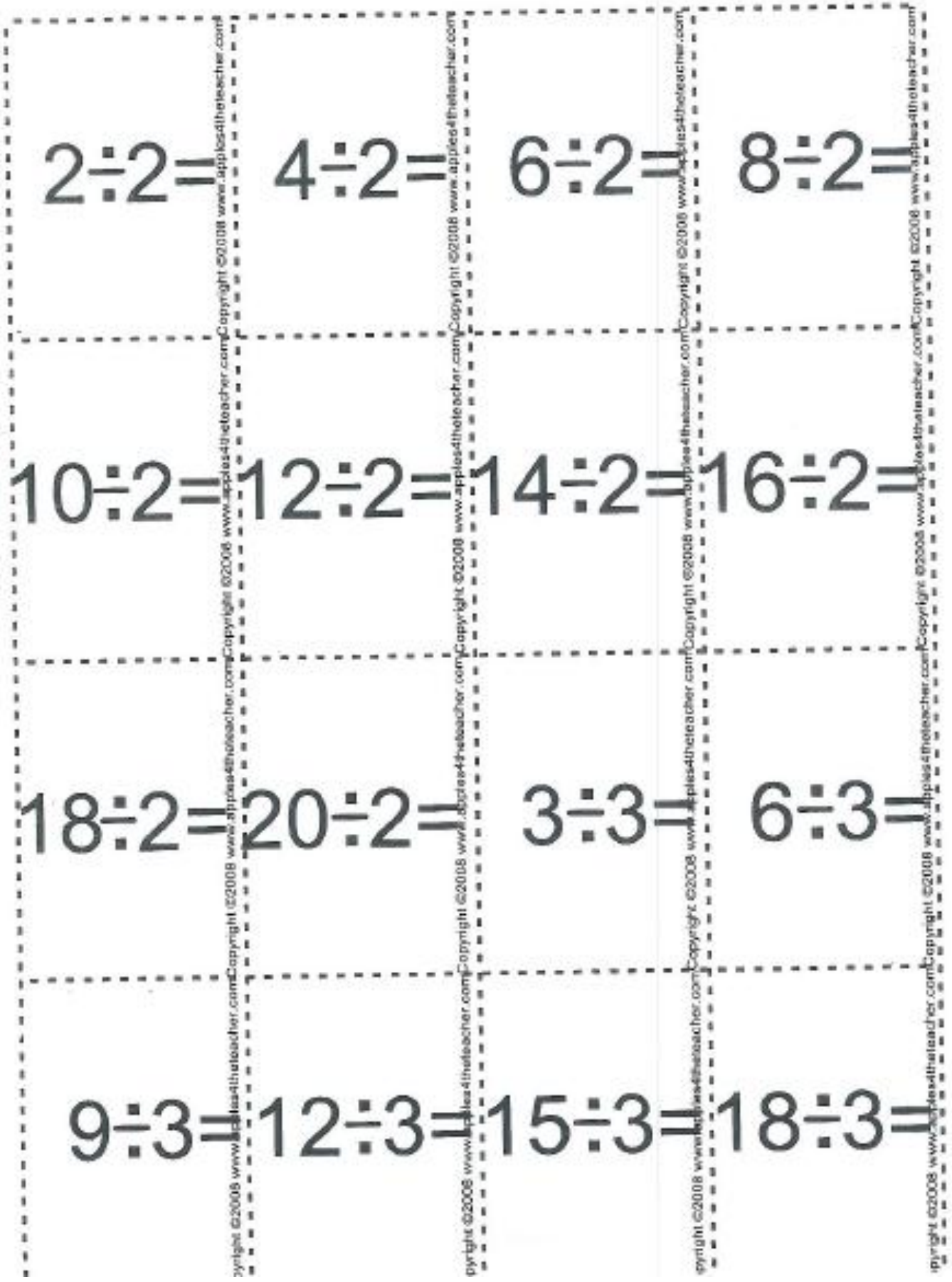
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