

May 22, 2023

Dear Parents of Incoming 6<sup>th</sup> Graders,

I am asking for your help in encouraging your child over the summer to continue their success in mathematics and to see math as a useful and practical way of relating it to everyday situations. A good example would be when you go out to eat. Ask your child to figure out what the tip would be to leave for the waitress/waiter. Many students think math is just a matter of talent. Yet we know from studies that success in math results from the effort you make and the learning habits that you have developed. Most math concepts build on what we have learned earlier.

I have informed your child of how they can continue to keep their math skills up to the standards needed for the upcoming school year. They have marked in their workbook to complete certain pages. These are concepts that were covered in the year and need continued practice as well as application problems. **These required pages will be turned in for a grade the first week of the new school year.** Students were asked to show their work and NOT to use calculators. I also suggest they play games that involve practice of adding, subtracting, multiplying, and dividing basic facts.

By working on these pages over the summer, I hope students will come to a new school year in math with confidence about their work and to learn to reason and communicate more effectively with old and new concepts in mathematics.

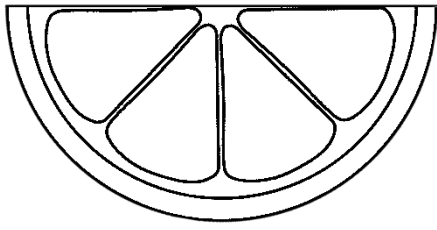
Thank you,

*Michelle Baldwin*

Michelle Baldwin

<https://sites.google.com/saintantoninus.org/mrsbaldwinstantoninusschool/summerpractice>

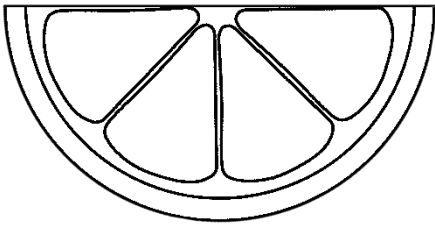
Part I



# Design Your Lemonade Stand

A large rectangular box with a black border, divided into three horizontal sections. The top section is a solid light gray rectangle. The middle section contains a string of seven gray triangular bunting flags hanging from the top. The bottom section is a large, empty white rectangle for drawing or writing.

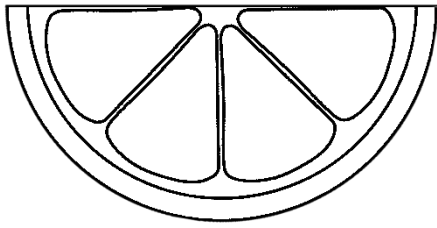
## Part 2



# Business Plan

Where will your lemonade stand be located?	
Who will be your customers?	
What days and hours will your stand be open?	
Will you have employees? Who will you hire and how much should you pay them?	
What will you need to buy for your stand (other than food & drink ingredients)?	
How many customers do you estimate you will have each day (estimate between 40-100)	

## Part 3



# Building Your Lemonade Stand

One of your family members has decided to invest in your business by giving you \$200 for non-food items. Look at the price list below and decide what reusable items you will purchase for your lemonade stand. Begin with the most important items, and if you have money left over you can add some of the fun items. Keep in mind that you will need to buy more than 1 of some items because you may make more than 1 type of drink (lemonade & limeade).

*All prices include tax*

<b>Small Wooden Lemonade Stand</b>	<b>\$42.50</b>	<b>Locked cash box to store money</b>	<b>\$22.63</b>
<b>Medium Metal Lemonade Stand</b>	<b>\$86.75</b>	<b>Measuring Cup</b>	<b>\$2.25</b>
<b>Fancy Large Lemonade Stand</b>	<b>\$120.63</b>	<b>Large basket for lemon storage</b>	<b>\$10.15</b>
<b>Glass Drink Pitcher</b>	<b>\$12.41</b>	<b>Large Lemonade Dispensers (Set of 3)</b>	<b>\$61.25</b>
<b>Stirring Spoons - Set of 2</b>	<b>\$1.40</b>	<b>Lemon Mascot Costume</b>	<b>\$63.99</b>
<b>Mini Fridge</b>	<b>\$75.84</b>	<b>Street Sign</b>	<b>\$22</b>
<b>Large container to store sugar</b>	<b>\$8.20</b>	<b>Small plastic cups (100 count)</b>	<b>\$3.99</b>
<b>Juicer</b>	<b>\$12.45</b>	<b>Cutting Board</b>	<b>\$10.50</b>

**Glass  
Drink Pitcher**



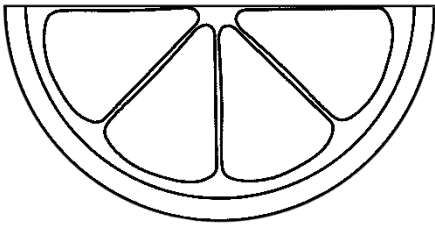
**Large  
Lemonade  
Dispensers  
(Set of 3)**

**Street Sign**



**Mascot  
Costume**

## Part 4



# Gathering Supplies

How many customers did you estimate your lemonade stand would have every day? (Part 2)	
Of these customers, how many people each day do you think will buy lemonade?	Make sure these two boxes add up to your total number of customers per day.
Of these customers, how many people each day do you think will buy limeade?	

## Recipes

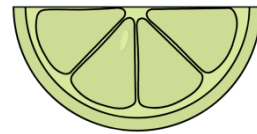
### Lemonade



Recipe for 1 pitcher (12 cups)

1  $\frac{3}{4}$  cup sugar  
8 cups cold water  
6 large lemons (1  $\frac{1}{2}$  cups of juice)

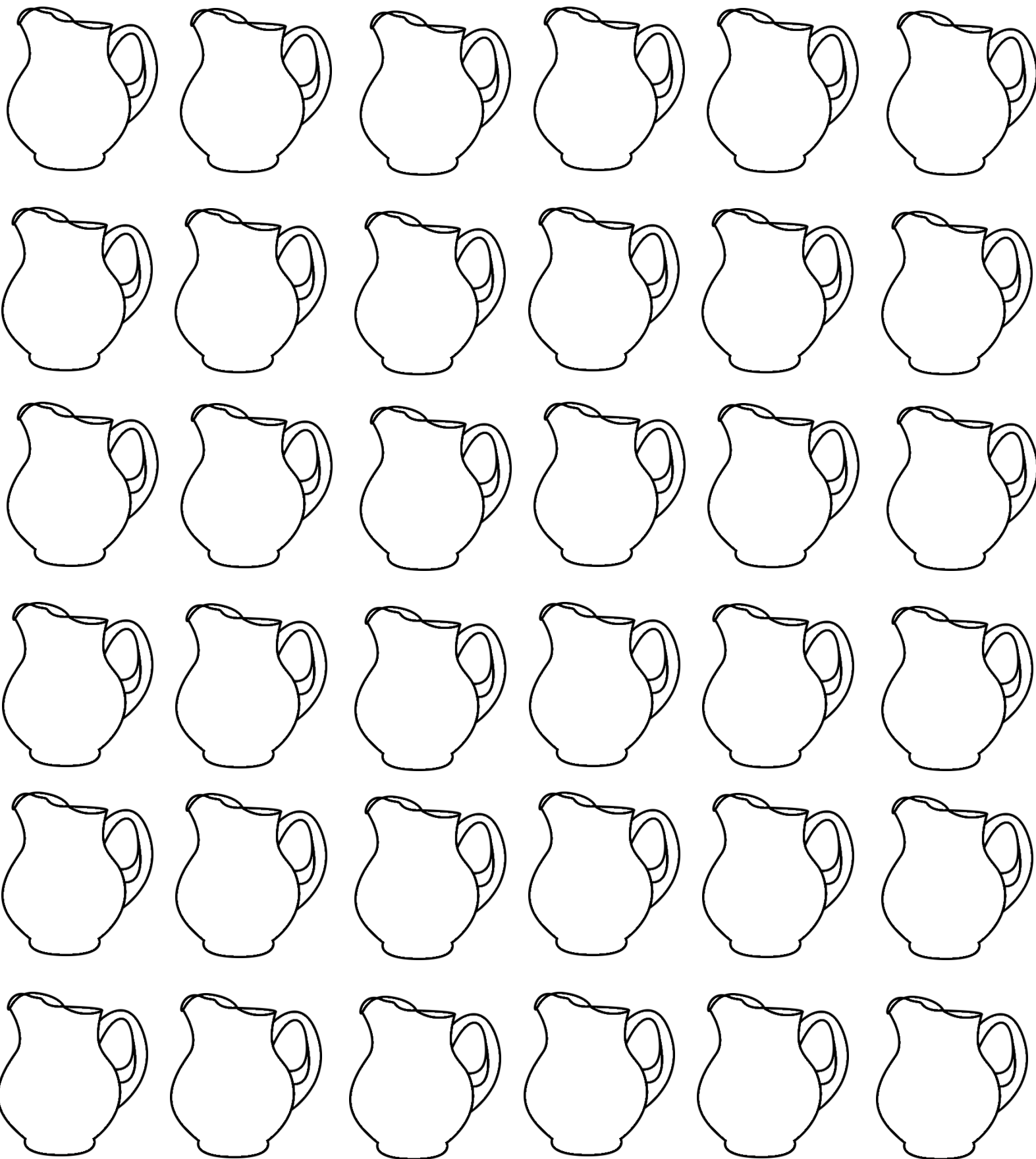
### Limeade



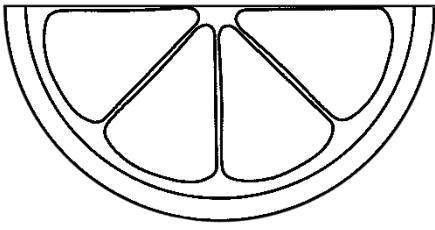
Recipe for 1 pitcher (12 cups)

1  $\frac{2}{3}$  cup sugar  
6  $\frac{1}{2}$  cups cold water  
8 limes

Visual Representation: Use for modeling and/or counting during Part 4.



# Part 4

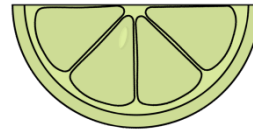


## Gathering Supplies

### Lemonade



### Limeade



Each pitcher contains 12 cups.  
I need \_\_\_\_\_ **cups** of lemonade  
each day.

I need \_\_\_\_\_ **pitchers** of  
lemonade each day.

Each pitcher contains 12 cups.  
I need \_\_\_\_\_ **cups** of limeade  
each day.

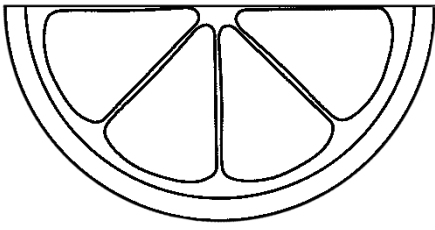
I need \_\_\_\_\_ **pitchers** of limeade  
each day.

Use the recipes for Lemonade and Limeade to calculate how much of each ingredient you need. daily and weekly Show your work on another piece of paper.

Lemonade Ingredient	Amount Needed Each Day	Amount Needed Each Week
Sugar		
Water		
Lemons		

Limeade Ingredient	Amount Needed Each Day	Amount Needed Each Week
Sugar		
Water		
Limes		

# Part 4



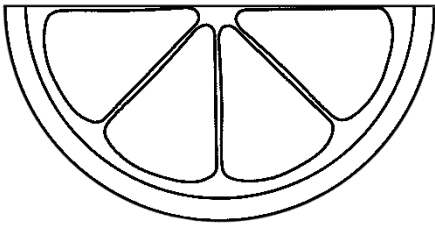
## Gathering Supplies

Use your table of total ingredients for Lemonade and Limeade to calculate how much of each ingredient you need to buy at your weekly shopping trip. Show your work on another piece of paper.

Ingredient	Amount Needed Each Week for <u>Lemonade</u>	Amount Needed Each Week for <u>Limeade</u>	Total Needed Each <i>Week</i>
Sugar			
Water			
Lemons			
Limes			



# Part 5



## Cost Analysis and Marketing

Use the price list below to estimate how much each cup of lemonade and limeade costs you. Decide how much you will charge in order to make a profit.

Lemonade



Lemons \$0.33 each

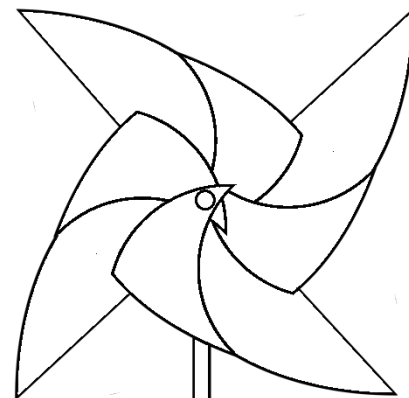


Sugar  
\$1/cup

Ingredient	Total Needed Each Day	Cost Each Unit	Total Cost Each Day
Sugar		\$1/cup	
Water		No Cost	
Lemons		\$0.33 each	
Total Cost Each Day			
Cost Per Cup			

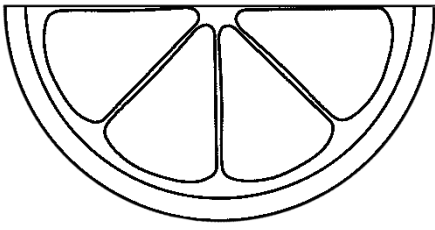
Now that you know how much each cup costs you, how much will you charge your customers for each cup of lemonade?

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To find the cost **per cup**, divide the total cost by how many customers you will serve lemonade. Round up if it doesn't divide evenly.

# Part 5



## Cost Analysis and Marketing

Use the price list below to estimate how much each cup of lemonade and limeade costs you. Decide how much you will charge in order to make a profit.

Limeade



Limes \$0.42 each

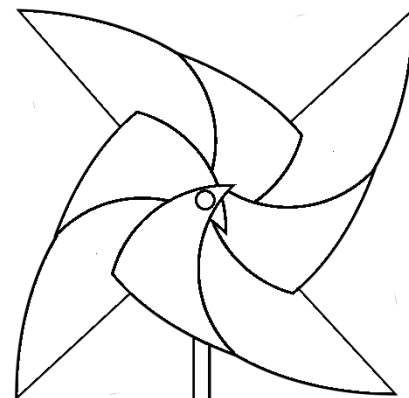


Sugar  
\$1/cup

Ingredient	Total Needed Each Day	Cost Each Unit	Total Cost Each Day
Sugar		\$1/cup	
Water		No Cost	
Limes		\$0.42 each	
Total Cost Each Day			
Cost Per Cup			

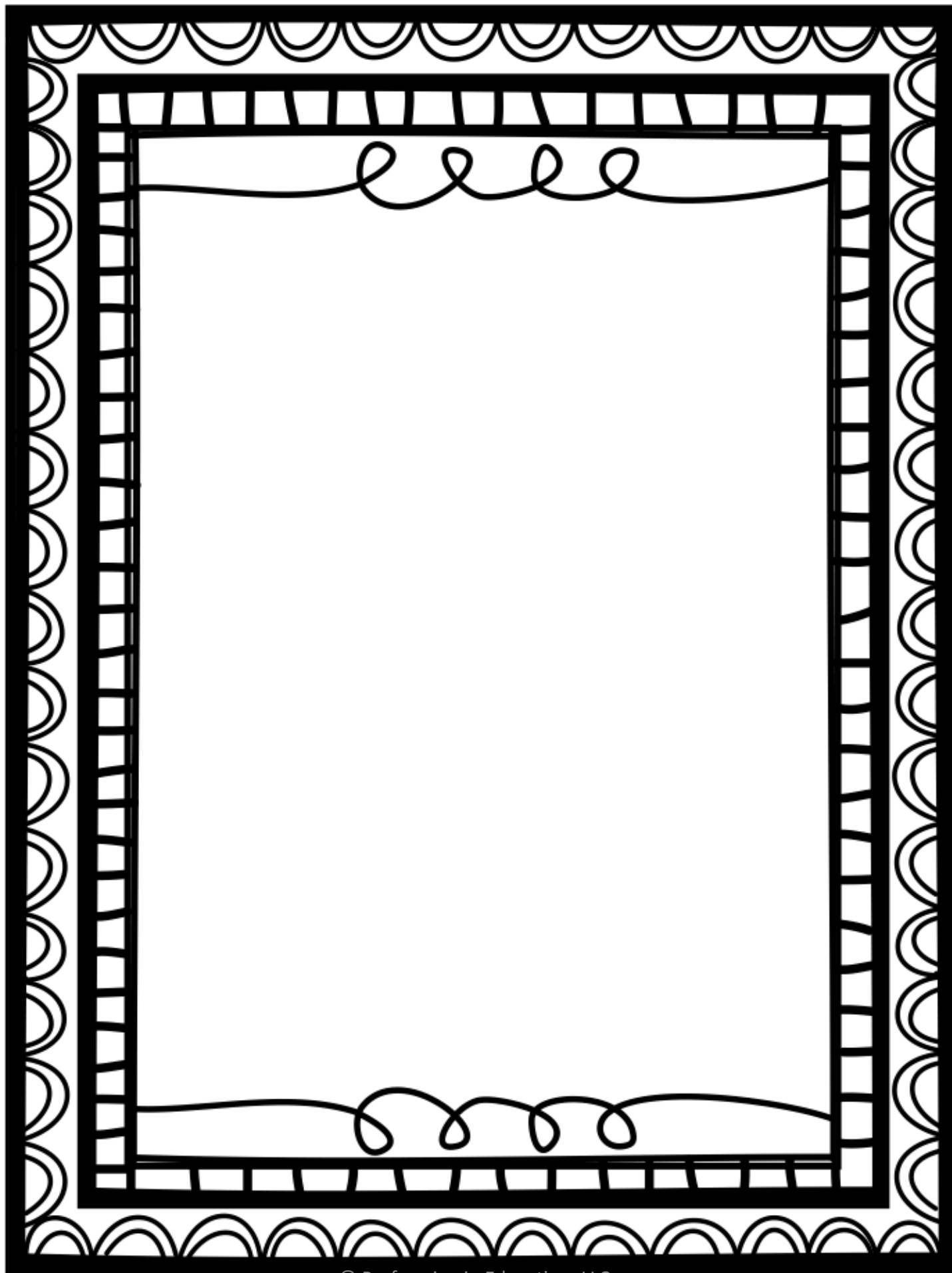
Now that you know how much each cup costs you, how much will you charge your customers for each cup of limeade?

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To find the cost **per cup**, divide the total cost by how many customers you will serve limeade. Round up if it doesn't divide evenly.

Part 5.2 Create a flyer to advertise your Lemonade Stand!



# THINGS YOU SHOULD KNOW

## Measurement Conversions:

Metric Length	Metric Weight	Metric Capacity
10 mm = 1 cm 100 cm = 1 m 1,000 mm = 1 m 1,000 m = 1 km	1 kg = 1,000 g 1 g = 1,000 mg	1 kL = 1,000 L 1 L = 1,000 mL
Standard Length	Standard Weight	Metric Capacity
1 mi. = 1,700 yd. 1 mi. = 5,280 ft. 1 yd. = 3 ft. 1 ft. = 12 in.	16 oz. = 1 lb. 1 T = 2,000 lbs.	1 gal = 4 qt. 1 gal = 128 fl oz. 1 qt. = 2 pts. 1 pt. = 2 c. 1 c. = 8 fl oz.

## Formulas:

Area of squares and rectangles:  $A = l \cdot w$

Volume of rectangular prisms:  $V = l \cdot w \cdot h$

## Order of Operations:

**P** : Parenthesis

**E** : Exponents

**MD** : Multiplication OR

Division (from left to right)

**AS** : Addition OR Subtraction

(from left to right)

## Decimal Operations:

	The Steps
Add	<ul style="list-style-type: none"> <li>Line up the decimals.</li> <li>Fill in empty spaces with a zero.</li> <li>Add.</li> <li>Drop the decimal down into your answer.</li> </ul>
Subtract	<ul style="list-style-type: none"> <li>Line up the decimals.</li> <li>Fill in empty spaces with a zero.</li> <li>Subtract.</li> <li>Drop the decimal down into your answer.</li> </ul>
Multiply	<ul style="list-style-type: none"> <li>Multiply as you normally would.</li> <li>Count the number of decimal places in the factors.</li> <li>The product should have the same number of decimal places as the factors.</li> </ul>
Divide	<ul style="list-style-type: none"> <li>Divide as you normally would.</li> <li>Float the decimal up into your answer.</li> </ul>

## Fraction Operations:

	The Steps
Add	<ul style="list-style-type: none"> <li>Re-write each fraction with the LCD.</li> <li>Add the numerators.</li> <li>Simplify.</li> </ul>
Subtract	<ul style="list-style-type: none"> <li>Re-write mixed numbers as improper fractions.</li> <li>Re-write each fraction with the LCD.</li> <li>Subtract the numerators.</li> <li>Simplify.</li> </ul>
Multiply	<ul style="list-style-type: none"> <li>Re-write mixed numbers as improper fractions.</li> <li>Multiply straight across.</li> <li>Simplify.</li> </ul>
Divide	<ul style="list-style-type: none"> <li>Re-write mixed numbers as improper fractions.</li> <li>Flip the second fraction.</li> <li>Change the division sign to multiplication.</li> <li>Multiply straight across.</li> <li>Simplify.</li> </ul>



# GCF AND LCM

1) Find the GCF of 44 & 14	2) Find the GCF and LCM of 5 & 8  GCF : _____  LCM : _____	3) Find the GCF of 20 & 15
4) Find the GCF and LCM of 4 & 6  GCF : _____  LCM : _____	5) Find the GCF of 30 & 40	6) Find the GCF and LCM of 16 & 6  GCF : _____  LCM : _____
7) Find the LCM of 4, 21 and 24	8) Find the GCF and LCM of 12 & 4  GCF : _____  LCM : _____	9) Find the LCM of 3 & 5
10) Find the GCF and LCM of 30 & 6  GCF : _____  LCM : _____	11) Find the LCM of 14, 20 and 30	12) Find the GCF and LCM of 6 & 12  GCF : _____  LCM : _____



# ADD & SUBTRACT DECIMALS

**Directions:** Simplify each expression. Show your work.

1)  $13.2 + 6.84$

2)  $19.12 + 0.45$

3)  $10.362 - 1.2$

4)  $30.5 - 3.23$

5)  $12.89 + 4.9$

6)  $5.032 + 9.6$

7)  $15.5 - 3$

8)  $16.32 - 8.1$

9) You buy 2.67 pounds of apples and 4.9 pounds of oranges. How many pounds of fruit did you buy?

10) You cut a 2.675 foot section from an 8.9 foot piece of wood. How much is left?

11) Gina has three rolls of ribbon. One roll has 12.6 inches, the second is 18.24 inches long and the last has 19.05 inches of ribbon. How much ribbon does she have?

12) Travis has a \$20 gift card. He spent \$9.62 and then another \$2.49. How much is left on the gift card?

# ➤➤➤ ADD & SUBTRACT FRACTIONS

**Directions:** Simplify each expression. Show your work.

1)  $\frac{1}{2} + 6\frac{2}{3}$

2)  $\frac{5}{8} + 2$

3)  $5\frac{3}{5} - 1\frac{1}{3}$

4)  $10\frac{4}{5} - 3\frac{1}{2}$

5)  $3\frac{1}{4} + 4\frac{1}{2}$

6)  $9\frac{1}{3} + 4\frac{5}{6}$

7)  $8\frac{2}{3} - 5\frac{1}{5}$

8)  $4\frac{5}{6} - 1\frac{1}{8}$

9) Jake ran  $3\frac{1}{2}$  miles Saturday and  $4\frac{5}{6}$  miles Sunday. How far did he run over the weekend?

10) Wayne ran  $3\frac{1}{2}$  miles out of a  $9\frac{2}{3}$  mile race. How much further does he have left to run?



# MULTIPLYING FRACTIONS

**Directions:** Simplify each expression. Show your work.

1)  $\frac{2}{5} \cdot \frac{7}{10}$

2)  $\frac{2}{3} \cdot 8$

3)  $\frac{7}{8} \cdot \frac{2}{3}$

4)  $\frac{3}{10} \cdot \frac{1}{4}$

5)  $3\frac{1}{2} \cdot 4$

6)  $6\frac{1}{8} \cdot 2\frac{1}{2}$

7)  $3\frac{1}{3} \cdot 4\frac{3}{4}$

8)  $5\frac{2}{5} \cdot \frac{9}{10}$

9)  $8\frac{1}{3} \cdot 2\frac{1}{4}$

10)  $3\frac{3}{5} \cdot 6\frac{1}{5}$

11) Kim has four pieces of ribbon that are each  $12\frac{1}{5}$  inches long. How much ribbon does she have altogether?

12) You ran  $4\frac{1}{2}$  times around a  $2\frac{1}{4}$  mile track.  
How far did you run?

13) Sasha has six boxes of chocolate that each weigh  $16\frac{1}{8}$  ounces. How much chocolate does she have altogether?





# DIVIDING FRACTIONS

**Directions:** Simplify each expression. Show your work.

1)  $\frac{2}{5} \div 8$

2)  $\frac{5}{6} \div 4$

3)  $\frac{7}{8} \div 2$

4)  $\frac{9}{10} \div 4$

5)  $3\frac{1}{2} \div 5$

6)  $6\frac{1}{5} \div 2$

7)  $9\frac{1}{3} \div 3$

8)  $5\frac{2}{5} \div 2$

9)  $5\frac{1}{2} \div \frac{3}{5}$

10)  $\frac{7}{10} \div \frac{1}{3}$

11)  $10\frac{1}{4} \div \frac{2}{5}$

12)  $\frac{11}{12} \div \frac{1}{6}$

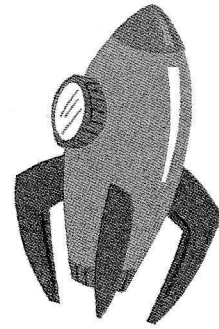
13) A  $4\frac{9}{10}$  foot long piece of wood is cut into 6 sections. How long is each section?

14) You split  $8\frac{1}{2}$  pounds of strawberries equally among 5 containers. How many pounds of strawberries are in each container?

# Performance Task 1

Name \_\_\_\_\_

## Summer Vacation: Year 2995



- 1 Yolanda and her family are voyaging to the edge of the Milky Way for summer vacation. But she still has to do her summer math project! To start the assignment, Yolanda records the distance the spaceship traveled since breakfast.

7,837,927,457 miles

- A. Write the value of each 7. If Yolanda starts with the 7 in the ones place, how could she get numbers equal to the values of the other 7s?

- B. HANK, the family robot, printed some decimals for Yolanda.

Write each in standard form. Then order them from greatest to least.

six hundred eighty-three thousandths

$$(7 \times \frac{1}{10}) + (8 \times \frac{1}{100})$$

$$(6 \times \frac{1}{10}) + (1 \times \frac{1}{100}) + (8 \times \frac{1}{1000})$$

seven hundred eight thousandths

- C. HANK gives Yolanda another task. He asks her to round each decimal in problem B above to the nearest tenth.

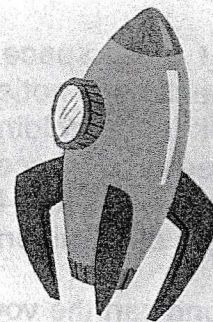
# Performance Task 1

## A Handy Helper

Name \_\_\_\_\_

Space Travel Nutrition

- 2** Yolanda's brother George also has to keep up with his summer math project. When George sits down with HANK, the robot prints some incomplete multiplication sentences.



- A.** Help George complete the multiplication sentences below. Then describe the pattern. Write the next multiplication sentence in the pattern.

$$30 \times 20 = \underline{\hspace{2cm}}$$

$$3 \underline{\hspace{2cm}} \times 20 = 6,000$$

$$3,000 \times 20 = \underline{\hspace{2cm}}$$

$$3 \underline{\hspace{2cm}} \times 20 = 600,000$$

Yolanda and George's home on Earth has a greenhouse with 68 tomato plants. Last week HANK told the greenhouse computer to give each tomato plant 284 mL of water. This week HANK told the greenhouse computer to give each tomato plant 307 mL of water.

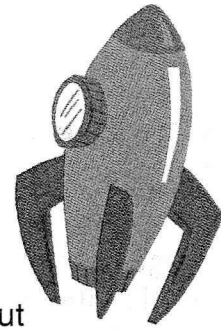
- B.** How much water did the tomato plants get in all?

- C.** Next week each tomato plant will need 20 mL more than half the water it got this week. Write an expression for the direction HANK might give to the greenhouse computer.

# Performance Task 1

## Space Travel Nutrition

Name \_\_\_\_\_



- 3** A member of the space ship crew checks the supply of fruit snacks. He notices that there are 15,481 fruit snacks left in the holding bin of the ship. Unfortunately, he also sees that space mice have munched on 1,128 of the snacks. There are 47 people on the spaceship. Each person gets one fruit snack each day.

- A.** How long can the voyage continue before the space ship runs out of fruit snacks?

Here are some strategies you can use.

- Draw an array.
- Draw an area model.
- Multiply to divide.
- Break apart the dividend.

Twice a day, each of the 47 people on the spaceship takes a vitamin capsule. They also take a mineral capsule at breakfast, lunch, and dinner, however 12 people do not take these mineral capsules.

- B.** Write an expression for the total number of capsules taken each day. Evaluate your expression.



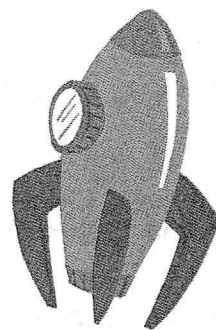
# C Performance Task 1

## Space Hobbies

Name \_\_\_\_\_

- 4 George is working on his miniature magnetic train. The rocket locomotive is  $\frac{7}{8}$  inch long. George attaches a meteor car that is  $\frac{2}{3}$  inch long. Then he attaches a Martian cattle car that is  $\frac{5}{6}$  inch long.

A. How long is the magnetic train now? Write your answer in simplest form.



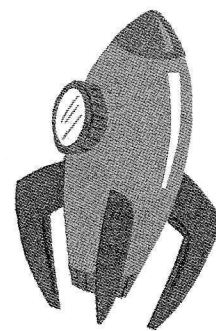
Yolanda is making a model of a galaxy worm. The worm's head is  $2\frac{1}{2}$  meters long. She decides that is too long, so she cuts  $\frac{3}{4}$  meter off. Then Yolanda attaches the worm's tail, which is  $3\frac{3}{5}$  meters long.

B. How long is the galaxy worm? Write your answer in simplest form.

## Performance Task 1

### Outerspace Activity

Name \_\_\_\_\_



- 5 The fuel tank on Yolanda's space suit was  $\frac{9}{10}$  full. She went on a space walk before lunch and used  $\frac{3}{4}$  tank of fuel. At lunch, Yolanda's dad asks how much fuel she had left in her tank. Yolanda thinks a moment before replying, "The tank must be  $\frac{3}{5}$  full now."

A. Is Yolanda's answer reasonable? Explain.

George's space scooter has  $4\frac{1}{8}$  liters of fuel in its tank. He adds  $2\frac{1}{2}$  liters of fuel and takes the scooter for a ride around the spaceship. During the ride, the scooter uses  $1\frac{1}{4}$  liters of fuel.

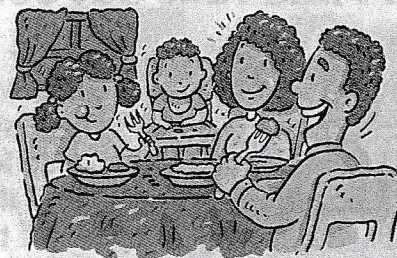
B. How much fuel is left in the tank?

## Performance Task 2

### The Golden Crust Pizzeria

Name \_\_\_\_\_

- 1 Vincent is a waiter at his family's pizzeria, The Golden Crust. This restaurant is known for its large vegetarian-style rectangular pizzas. It is no surprise that many patrons take home some of their leftover pizza.



- A. The Dozzo family has  $\frac{4}{5}$  of the asparagus pizza left over from their dinner. Mr. Dozzo wants to take home  $\frac{3}{4}$  of it. Will Vincent give him less than  $\frac{4}{5}$  pizza, more than  $\frac{4}{5}$  pizza, or  $\frac{4}{5}$  pizza? Explain.

- B. Mr. Benvenuto loves the broccoli pizza. There are  $1\frac{1}{2}$  broccoli pizzas left from his family's dinner. Mr. Benvenuto tells Vincent he only wants  $\frac{2}{3}$  of the broccoli pizzas to take home. How much pizza will Vincent give him?

- Draw a diagram.
- Write a multiplication sentence.



## Performance Task 2

### The Pizza Take Out Counter

Name \_\_\_\_\_



- 2** Vincent's cousin Terry also works at The Golden Crust. She is usually assigned to the take out counter. Today, one third of the Mediterranean pizza is left. Five coworkers want to buy the remaining Mediterranean pizza. They ask Terry to cut the pizza so they can share it equally.

**A.** How much pizza will each coworker receive?

- Draw an diagram.
- Write a division sentence.
- Check your answer by multiplying.

- B.** Ms. Tucci orders 4 artichoke pizzas for her birthday party. She asks Terry to cut them into  $\frac{1}{3}$  pizzas. How many thirds will Ms. Tucci take home?



## Performance Task 2

### A Most Important Ingredient

Name \_\_\_\_\_



- 3** Vincent gets three packages of fresh mozzarella from the refrigerator. The first package weighs 0.84 pound. The second package weighs 1.37 pounds. The third package lost its label. Vincent weighs the three packages together and finds the total weight is 4.3 pounds.

**A.** How much does the third package of mozzarella weigh?

Here are some strategies you can use.

- Use ones flats, tenths rods, and hundredths cubes.
- Draw models.
- Use properties of addition.
- Use place value.

Terry is making three pizzas with ricotta cheese. She starts with 2.14 pounds of ricotta. She puts 0.45 pound of ricotta on a large pizza. She puts 0.28 pound of ricotta on a medium pizza. And she puts 0.14 pound of ricotta on a small pizza.

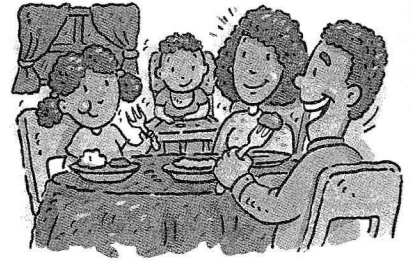
**B.** Estimate how much ricotta Terry put on the three pizzas. Calculate how much ricotta Terry has left.

## CPerformance Task 2

### A More Important Ingredient

Name \_\_\_\_\_

- 4 Vincent made dough and cut it into 6 pieces to make 6 pizzas. Each piece of dough weighed 0.54 pounds. His dad looked at the scale and said, "That's too light. Each pizza dough should weigh 0.9 pound."



- A. How much more dough does Vincent need to make?

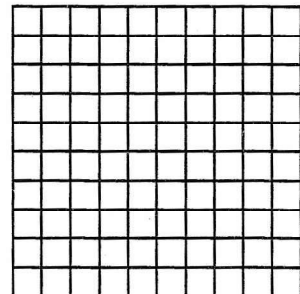
Here are some strategies you can use.

- Use tenths rods and hundredths cubes.
- Draw models.
- Use place value.

Terry is making pizza dough for two small pizzas. The first dough weighs 0.7 pound. The second dough weighs 0.8 times as much as the first dough.

- B. How much does the second dough weigh?

- Use an array.



## Performance Task 2

### Restaurant Deliveries

Name \_\_\_\_\_



- 5** The Golden Crust received a delivery of 212.5 pounds of flour. Terry needs to separate the flour into equal amounts to store it in the basement. Her uncle tells her she can separate the flour into 10, 100, or 1,000 bags.

- A.** Complete the table below. How much will each bag weigh if Terry puts the flour into 10 bags? 100 bags? 1,000 bags? Describe the pattern in the table.

Total Flour (lb)	$\div 10$	$\div 100$	$\div 1,000$

This morning, The Golden Crust received a delivery of 6.86 pounds of mushrooms. The pizza chef said, "That isn't enough mushrooms!" So he called the mushroom distributor and ordered more. In the afternoon, another 30.5 pounds of mushrooms arrived. The chef asks Vincent to separate the mushrooms into 8 equal piles.

- B.** How much will each pile weigh?