

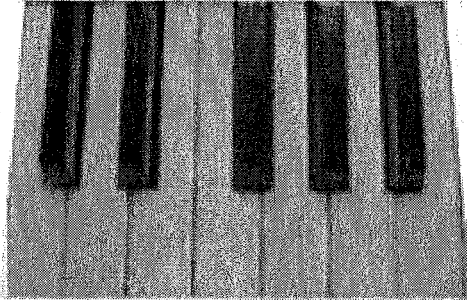
# Ratio Problem Solving Review Packet

Name \_\_\_\_\_

**You will be working with a partner or partners during class. Use your notebook pages 1 -26 as a resource. We will be going over this packet next Monday.**

**It needs to be brought to class Monday. This will help you review for your test either Thursday or Friday. I will announce the test day on Monday.**

Pianos and pipe organs contain keyboards, a portion of which is shown below.



- What is the ratio of black keys to white keys in the picture above?

\_\_\_\_\_

- This is a scaled down picture of a keyboard. Using the ratio of 5 black keys to every 7 white keys, what would the total number of black keys be if there were 35 white keys?  
**USE A TAPE DIAGRAM to show your work.**

Use this recipe shown in the table to answer the questions below. Use tape diagrams, tables, double number lines, or any strategy you want to solve this task.

Grandma's Recipe for Sugar Cookies
1 $\frac{1}{2}$ cups butter
2 cups sugar
4 eggs
$\frac{3}{4}$ teaspoon baking powder
1 $\frac{1}{4}$ cups flour
$\frac{1}{4}$ teaspoon salt

- How many cups of sugar are needed for each egg?

Answer \_\_\_\_\_

- Your sister notices that she needs three times as much baking powder as salt in this recipe. What is the ratio of baking powder to salt?

Answer \_\_\_\_\_

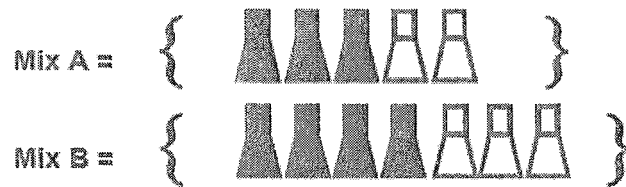
- Mr. Copper's class has a female student to male student ratio of 3:2. Mr. Copper's class has 18 girls, how many boys does he have?

**MAKE A TABLE** to show your work.

Answer \_\_\_\_\_

- Ms. Green's class has the same number of students as Mr. Copper's class. Remember his ratio of girls to boys is 3:2. Ms. Green's ratio of girls is 1 to every 4 boys in her class. How many boys are in Ms. Green's class? **USE TAPE DIAGRAMS TO COMPARE AND SOLVE.** **\*\*REMEMBER THEY HAVE THE SAME AMOUNT OF STUDENTS TOTAL.\*\***

Fashion designers are trying to decide on just the right shade of blue for a new line of jeans. They have several bottles of fabric color, some with blue color and some with white color. They plan to mix these together to get the desired color.

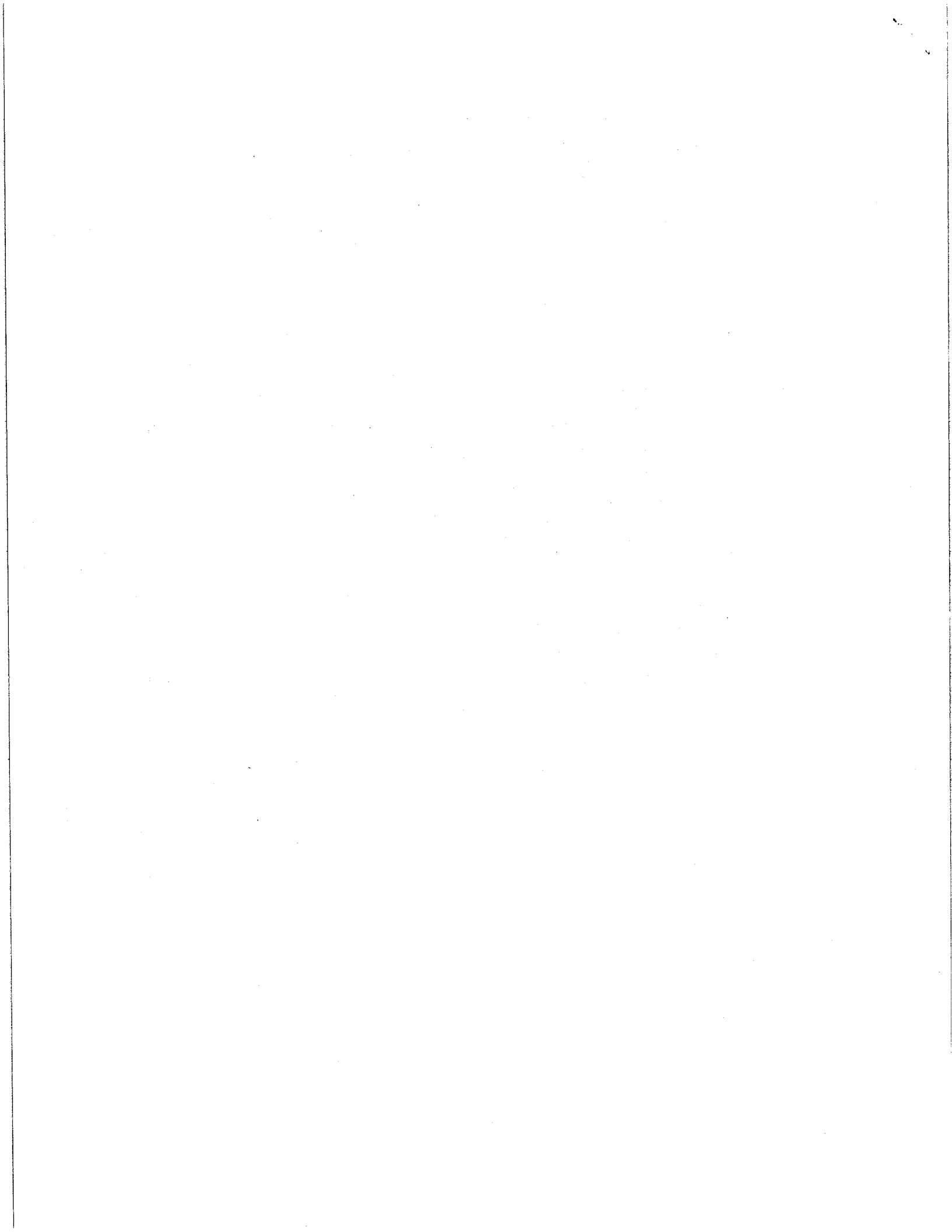


- Will both mixes produce the same color jeans? \_\_\_\_\_ Justify your reasoning.
- A designer uses the table below to think about her own special mix, Mix C. How many liters of blue color will she need to make a total of 40 liters?

Liters of Blue Color	Liters of White Color	Total Liters
5	3	8
10	6	16

Answer \_\_\_\_\_

- If the designer used 12 liters of blue color how many liters of white color would she have to use? **USE A DOUBLE # LINE TO SHOW YOUR WORK.**



1. Mr. Smith purchased a new car for \$30,218.50. He has to pay on his loan for 60 months. **Lesson 13/14**

a. His payment is the same every month, calculate the monthly payment. *(remember this is money)* **6.NS.2**

Answer \_\_\_\_\_

b. Explain the value of each digit in your answer to 1(a) providing the place value term and the monetary amount. **5.NBT.3**

Eg. \$ 2.15 2 is in one's place and it's value is \$2, 1 is in the tenths place and it's value is \$0.10, the 5 is in the hundredths place and it's value is \$0.05

Digit	2	1	5
Place value	ones	tenths	hundredths
Monetary value	\$2	\$0.10	\$0.05

Digit					
Place value					
Monetary value					

2. Mr. Edgerton is building a deck on his house. He had to go buy wood to frame it. Each piece of wood he bought measured 6 feet, which is approximately 1.8287 meters:

3.25m



8.50 m

- a. Determine the amount of wood, in meters, needed to the frame. 6NS.3 lesson 9  
*Perimeter = l + l + w + w* or *Perimeter = 2l + 2w*

- b. Each piece of wood bought measured is approximately 1.8287 meters. How many boards did Mr. Edgerton need to buy? Use the total of meters from the perimeter in 2 a as your dividend.

1. Write your division sentence (expression). \_\_\_\_\_

2. Use a calculator to solve.

Round the answer to the nearest *thousandth*. \_\_\_\_\_

How many boards does he need to buy to have enough to frame the deck? 6NS.3 lesson 9,14,15

Answer: \_\_\_\_\_ (use answer for b.2 and put a label with it)



3. Leah paid \$53.95 for 16.1 gallons of gas.

a. What was the cost per gallon rounded to the nearest **hundredth**? 6NS.3 lesson 14 &15

b. For your work in 3(a) above, explain what is happening mathematically to the decimal points in the divisor and dividend before dividing. Use place value, multiplication with powers of 10, or equivalent fractions in your explanation. 6NS.3 lesson 14 &15

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4. The PTA created a cross-country trail for the meet.

- a. The PTA placed a trail marker in the ground every **four** miles. Every **nine** miles the PTA set up a water station. What is the *shortest* distance a runner will have to run to see both a water station and trail marker at the same location? **6NS4** (use any method)

Answer: \_\_\_\_\_

- b. The PTA wants to cover the wet areas of the trail with wood chips. They find that one bag of wood chips covers a  $3\frac{1}{2}$  yards section of the trail. If there is a wet section of the trail that is approximately  $50\frac{1}{4}$  yards long, how many bags of wood chips are needed to cover the wet section of the trail? **6NS1**

Answer \_\_\_\_\_