# Performance Based Assessment 1 

## Proportional Reasoning - Grade 6

## Student Name

School

## Date

## Teacher

1. Giovanni is visiting his grandmother who lives in an apartment building on the $25^{\text {th }}$ floor. Giovanni enters the elevator in the lobby, which is the first floor in the building. The elevator stops on the $16^{\text {th }}$ floor. What percentage of 25 floors does Giovanni have left to reach his grandmother's floor? Use pictures, tables or number sentences to solve the task. Explain your reasoning in words.

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

a. What is the ratio of black keys to white key in the picture above?
b. If the pattern show continues, how many black keys appear on a portable keyboard with 35 white keys?
c. If the pattern shown continues, how many black keys appear on a pipe organ with a total of 240 keys?

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3. a.) Mr. Cooper's class has a female student to male student ratio of $3: 2$. If Mr. Cooper's class has 18 girls, how many boys does he have? Show how you determined your answer. Explain your reasoning in words.
b.) Ms. Green's class has the same number of students as Mr. Cooper's class. Her female-to-male ratio is 2:1. Which class has the greater number of females? How do you know?

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4. Use the recipe shown in the table to answer the questions below. Use pictures, tables of number sentences to solve the task.

| Grandma's Recipe for Sugar Cookies |
| :---: |
| $11 / 2$ cups butter |
| 2 cups sugar |
| 4 eggs |
| $3 / 4$ teaspoon baking powder |
| $11 / 4$ cups flour |
| $1 / 4$ teaspoon salt |

a. How many cups of sugar are needed for each egg? How do you know?
b. Your sister notices that she needs three times as much baking power as salt in this recipe. What is the ratio of baking powder to salt? Explain your reasoning in words.
5. 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.

a. Will both mixes produce the same color jeans? Use mathematical reasoning to justify your answer.
b. A designer uses the table below to think about her own special mix, Mix C. How many liters of blue will she need to make a total of 40 liters? Explain your reasoning in words

| Liters of <br> Blue Color | Liters of <br> White Color | Total <br> Liters |
| :---: | :---: | :---: |
| 5 | 3 | 8 |
| 10 | 6 | 16 |
|  |  |  |
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|  |  |  |

