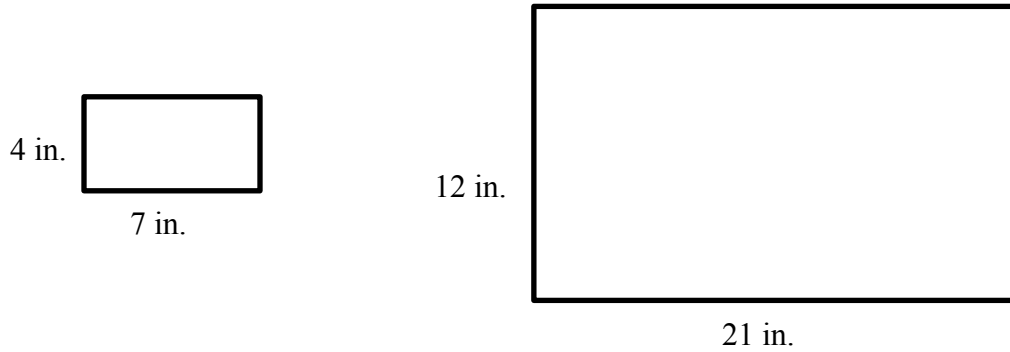Name _____ Date_____

Mr. Warren, a math teacher, drew two rectangles on the board along with their lengths and widths (in inches).

4 in.

7 in.

12 in.

21 in.

He then asked his class to write ratios comparing the lengths and widths of the two rectangles and to explain their ratios.

- Student A said, "The length of the larger rectangle is 14 inches longer than the length of the smaller rectangle, so my ratio is 1:14."

- Student B said, "The width of the smaller rectangle is 8 inches shorter than the width of the larger rectangle, so my ratio is 1:8."

- Student C said, "The width of the larger rectangle is three times the width of the smaller rectangle, so my ratio is 1:3."

Evaluate each student's reasoning to determine who is correct. Explain and justify each of your conclusions.

Name _____ Date_____

1. To make the color purple, Jamal's art teacher instructed him to mix equal parts of red paint and blue paint. To make a different shade of purple, the ratio of red paint to blue paint is 2:1. What does the ratio 2:1 mean?

2. Miss Williams asked her class if they prefer doing their homework before school or afterschool. If the ratio of students who prefer doing homework before school to students who prefer doing homework afterschool is $\frac{7}{15}$, what does the ratio $\frac{7}{22}$ represent? Explain.

Name _____ Date_____

Mr. Keen, a band teacher, wanted to know if certain types of instruments are more appealing to one gender or the other. So, he conducted a survey of his students' preferences. The results are compiled in the chart below:

Instruments	Boys	Girls
Strings	15	23
Woodwind	19	30
Brass	27	13
Percussion	32	25

1. What is the ratio of the number of girls preferring woodwind instruments to the number of boys preferring woodwind instruments?

2. What is the ratio of the number of boys preferring percussion instruments to the total number of boys who were surveyed?

3. What is the ratio of the number of girls preferring strings to the total number of students preferring strings?