

Name: ..... Class: .....

### Compare ratios: word problems

1. On Saturday, Mrs. Anna sold 20 apples and 23 oranges in her shop. On Sunday, She told her daughter that she sold 10 apples and only 13 oranges. Which day did she sell a higher ratio of apples to oranges? Write your answer to the nearest ten-thousands.
2. In Anthony's class, 28 of the students are tall and 14 are short. In Charles' class, 9 students are tall and 24 students are short. Which class has a smaller ratio of short to tall students? Write your answer to the nearest hundreths.
3. At Shirly's birthday, 11 girls and 7 boys performed in the birthday musical chair game. At her sister's birthday party, 9 girls and 17 boys performed in the birthday musical chair game. Which party had a higher ratio of boys to girls who performed at the birthday musical chair game? (write your answer to the nearest ten-thousandths.)
4. Francis bought 7 textbooks and 9 exercices books from a nearby bookshop. His friend, Leo bought 6 textbooks and 8 exercice books from the same bookshop.  
Who has a lower ratio of textbooks to exercice books?  
**a- Leo**  
**b- Francis**  
**c- None of the above, the ratios are equivalent**
5. Yesterday, Rita bought 2 baskets of tomatoes and 4 baskets of onions from the farmers market. The following day, her husband bought 4 baskets of tomatoes and 8 baskets of onions from the supermarket. Who bought the highest ratio of tomatoes to onions?  
**a- Her husband**  
**b- Rita**  
**c- none of the above, the ratio are equivalent**

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1. We are looking for the rate of apples to oranges. ( apples : oranges)  
 On Saturday, she sold a ratio of 20 apples to 23 oranges = 20 : 23 or  $\frac{20}{23}$   
 On Sunday she sold a ratio of 10 apples to 13 oranges = 10 : 13 or  $\frac{10}{13}$   
 figure out which ratio is higher.  $\frac{20}{23}$  or  $\frac{10}{13}$

Express both ratios as percentages in order to compare them easily.  
 Convert each ratio into a decimal first and then to percentages.

$\frac{20}{23} = 0.8697$ --- Multiply by 100 to convert into percentage.  
 $0.8697 \times 100 = 86.97\%$

$\frac{10}{13} = 0.7692$ --- Multiply by 100 to convert into percentage  
 $0.7692 \times 100 = 76.92\%$  (Now, compare both percentages)  
 86.97% is greater than 76.92%

Therefore, she sold a higher ratio of apples to oranges on Saturday.

2. Therefore, Anthony's class has a smaller ratio of short to tall students.

3. Therefore, her sister's birthday party had higher ratio of boys to girls.

4. Therefore, Leo has a lower ratio of textbooks to exercise books.

5. Therefore, none of the above, the ratio are equivalent.