

Lesson Summary

For a ratio $A:B$, we are often interested in the associated ratio $B:A$. Further, if A and B can both be measured in the same unit, we are often interested in the associated ratios $A:(A+B)$ and $B:(A+B)$.

For example, if Tom caught 3 fish and Kyle caught 5 fish, we can say:

- The ratio of the number of fish Tom caught to the number of fish Kyle caught is 3:5.
- The ratio of the number of fish Kyle caught to the number of fish Tom caught is 5:3.
- The ratio of the number of fish Tom caught to the total number of fish the two boys caught is 3:8.
- The ratio of the number of fish Kyle caught to the total number of fish the two boys caught is 5:8.

For the ratio $A:B$, where $B \neq 0$, the value of the ratio is the quotient $\frac{A}{B}$.

For example: For the ratio 6:8, the value of the ratio is $\frac{6}{8}$ or $\frac{3}{4}$.

Problem Set

1. Maritza is baking cookies to bring to school and share with her friends on her birthday. The recipe requires 3 eggs for every 2 cups of sugar. To have enough cookies for all of her friends, Maritza determined she would need 12 eggs. If her mom bought 6 cups of sugar, does Maritza have enough sugar to make the cookies? Why or why not?
2. Hamza bought 8 gallons of brown paint to paint his kitchen and dining room. Unfortunately, when Hamza started painting, he thought the paint was too dark for his house, so he wanted to make it lighter. The store manager would not let Hamza return the paint but did inform him that if he used $\frac{1}{4}$ of a gallon of white paint mixed with 2 gallons of brown paint, he would get the shade of brown he desired. If Hamza decided to take this approach, how many gallons of white paint would Hamza have to buy to lighten the 8 gallons of brown paint?