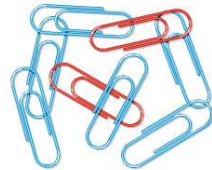


Ratios

A **ratio** is a comparison of two quantities by division.

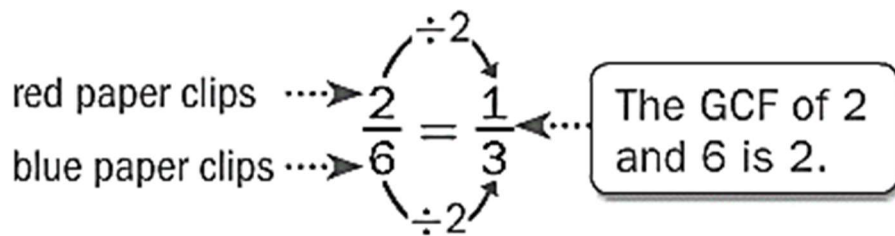
The ratio of two red paper clips to six blue paperclips can be written in the following ways:

2 to 6 **2:6** $\frac{2}{6}$



Just like fractions, we usually represent a ratio in simplest form.

ORDER MATTERS!



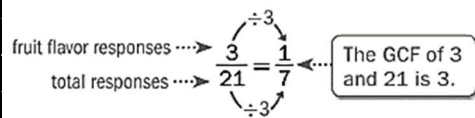
Example:

Several students named their favorite flavor of gum. Write the ratio that compares the number of students who chose fruit to the total number of students.

Favorite Flavors of Gum	
Flavor	# of Responses
Peppermint	9
Cinnamon	8
Fruit	3
Spearmint	1

Fruit: 3

Total: 9 + 8 + 3 + 1, or 21



The ratio is $\frac{1}{7}$, 1 to 7, or 1:7.

So, 1 out of every 7 students preferred fruit-flavored gum.

You Try:

Use the stars to answer questions 1 and 2.



1) Write the ratio of black stars to white stars in three different ways.

2:5 **2 to 5** $\frac{2}{5}$

2) Write the ratio of white stars to black stars in three different ways.

Use the table below to answer questions 3-6.

Favorite Pets	
Snake	15
Dog	10
Cat	6
Hamster	8
Fish	1

Pleasssssssse remember to sssssssssimplify!



- What is the ratio of people who chose **snakes** as their favorite pet to those who chose **dogs**? **15:10 simplified to 3:2**
- What is the ratio of people who chose **cats AND dogs** to those who chose **hamsters**?
- What is the ratio of those who chose **snakes** as their favorite pet to **everyone** that was surveyed? **15:40 simplified to 3:8**
- What is the ratio of those who chose **cats** to those who chose **fish**?

Use the words, "East Cobb Middle School" to answer questions 7-11.

- 7) What is the ratio of vowels to consonants? **7:13**
- 8) What is the ratio of letters in ECMS to East Cobb Middle School?
- 9) What is the ratio of the letters in "East Cobb" to the letters in "Middle School"? **8:12**
- 10) What is the ratio of the letters in "Middle School" to the letters in "East Cobb"?
- 11) Crain says the ratio of letters in "East" to "Cobb" is 4:4. Hailey says that ratio is 1:1. Who is correct? Explain your answer. **They are both correct because the ratio 4:4 simplifies to 1:1**

The table below shows the number of balloons purchased in each color at Party City. Using this information, answer questions 12-15.

Color	Red	Yellow	Blue	Green
Quantity Sold	10	20	15	25

- 12) Which two items does the ratio 10:20 represent?
- 13) Which two items does the ratio 3:5 represent? **Blue:Green**
- 14) Which two items does the ratio 5 to 3 represent?
- 15) Which two items does the ratio $\frac{3}{2}$ represent? **$\frac{\text{blue}}{\text{red}}$**
- 16) Which two items does the ratio 4:3 represent?

Different Types of Ratios

Part to _____ ratios are ratios that relate one part of a whole to another part of a whole.

Example:

There are 4 boys for every 6 girls. The ratio of boys (a part of the group of kids) to girls (another part of the group of kids) is 4:6 (*simplified to 2:3*).

You Try:



The ratio of boys to girls is: _____ to _____

The ratio of girls to boys is: _____ : _____

Part to _____ ratios are ratios that relate one part of the whole to the whole.

Example:

There are 4 boys (a part of the group of children) for every 10 children (the whole group of children), written as 4:10 (*simplified to 2:5*). On the other hand, 6 girls for every 10 children is written as 6:10 (*simplified to 3:5*).

You Try:



The ratio of boys to children is: _____ to _____

The ratio of girls to children is: _____ : _____