

What do you know about ratios?

Ratios

A ratio is a comparison between two or more things. There are three forms in which you can write a ratio:

- 1) using a colon, 4 : 7
- 2) using the word "to", 4 to 7
- 3) as a fraction, $\frac{4}{7}$

In each case, it is read as 4 to 7. A ratio does not mean much if you do not know what you are comparing. Therefore, it is always **important to state above the ratio what you are comparing:**
boys to girls

4 to 7

Also, **order is very important with ratios** The ratio boys to girls is not the same as the ratio of girls to boys, because they are not in the same order.

You can have a two term or three term ratio.

A **part to part ratio** is comparing one part of a collection to another part, for example boys to girls. A part to part ratio can not be written as a fraction.

A **part to whole ratio** is comparing one part of the collection to the whole collection, such as boys to all students.

Three-Term Ratio: compare three quantities to each other

You can find **equivalent ratios the same way you find equivalent fractions**, multiply (or divide) each term by the same number.

ex. boys to girls an equivalent ratio is: b : g

$$\begin{array}{c} \times 2 \quad \left(\begin{array}{c} 4 \text{ to } 7 \\ 8 : 14 \end{array} \right) \times 2 \end{array}$$

Putting a ratio in lowest terms, is the same as putting a fraction in lowest terms, divide by a common factor, until the terms have no more common factors.



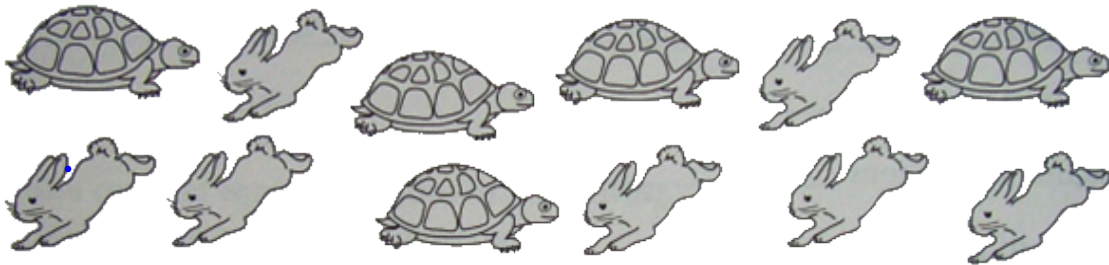
Two-Term Ratio

Three-Term Ratio

1. part-to-whole ratio

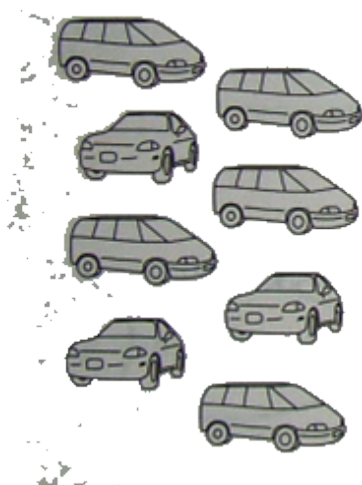
2. part-to-part ratio

Write each part-to-whole ratio as a ratio, a fraction and a percent.
Round percents to 2 decimal places.

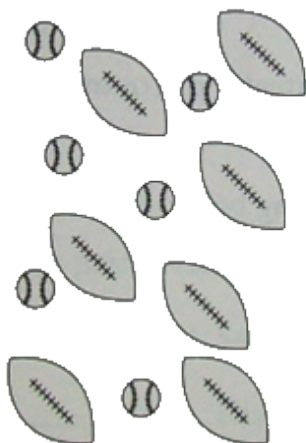


Write each part-to-part ratio.

a) cars to vans



b) footballs to baseballs



c) bananas to fruit



At a class party, there are 16 boys, 15 girls, and 4 adults.
Show each ratio as many ways as you can.

a) boys to girls

b) boys to girls to adults

c) adults to total number of people at the party

a)

b)

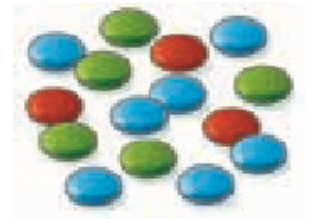
c)

Class/Homework

Homework pg. 266 #4ab, 5ab, 6, 8, 11a, b
solution to 4a $5:8$ $\frac{5}{8}$

-
4. Write each part-to-whole ratio as a fraction.
a) 5:8 b) 12:16 c) 4:9 d) 24:25
5. Write each part-to-whole ratio as a percent.
a) 19:20 b) 12:15 c) 3:8 d) 5:6

6. Look at the candy-covered chocolates below. Explain what each ratio means.
- a) 3:5
b) 7:5
c) 5:15
d) 3:5:7
e) 3:12



Apply

- 8.** The ratio of T-shirts to shorts in Frank's closet is 5:2.
- Write the ratio of T-shirts to the total number of garments.
 - Write the ratio in part a as a percent.
- 9.**
- Write a part-to-part ratio to compare the items in each sentence.
 - A student had 9 green counters and 7 red counters on his desk.
 - In a dance team, there were 8 girls and 3 boys.
 - A recipe called for 3 cups of flour, 1 cup of sugar, and 2 cups of milk.
 - Write a part-to-whole ratio for the items in each sentence in part a. Express each ratio as many ways as you can.
- 11.** A box contains 8 red, 5 green, 2 orange, 3 purple, 1 blue, and 6 yellow candies.
- Write each ratio.
 - red:purple
 - green:blue
 - purple:blue:green
 - orange and yellow:total candies
 - Suppose 3 red, 2 green, and 4 yellow candies were eaten. Write the new ratios for part a.

Attachments

Quiz on Percents (Mid Unit Feb 25).pdf