

**What do you know about ratios?**

Discuss advertisements on pg. 264 with students.

**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,  $\frac{4}{7}$  ← total

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      **B : G**  
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.

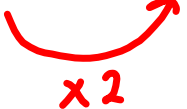
A part to part ratio is comparing one part of a collection to another part, for example boys to girls. A part to part ratio can not be written as a fraction.

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.

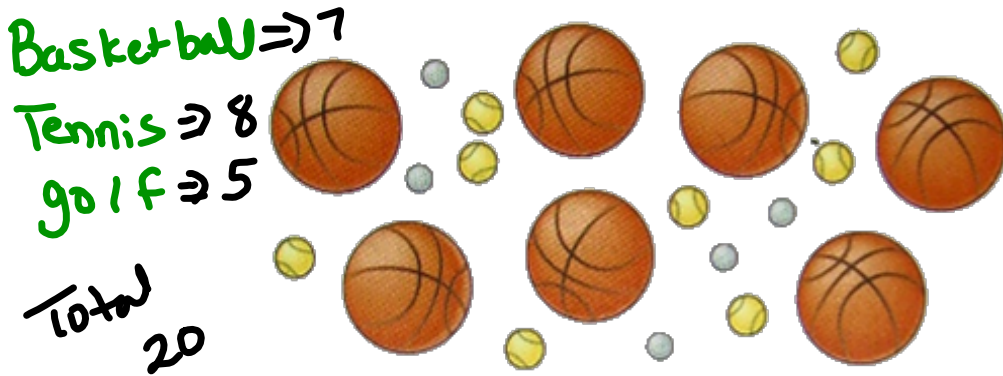
ex. boys to girls an equivalent ratio is: b : g  
4 to 7  
8 : 14

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.

$$\frac{1}{2} \stackrel{\times 2}{=} \frac{2}{4}$$


$$\frac{1}{2} \stackrel{\times 50}{=} \frac{50}{100}$$

$$\frac{24}{36} = \frac{12}{18} = \frac{6}{9} = \frac{2}{3}$$



### Two-Term Ratio

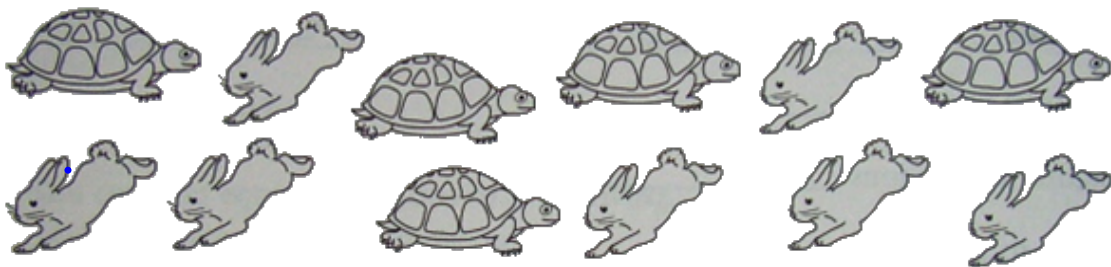
- part-to-whole ratio  
 Ex) Basketball : whole  
 $7 : 20$   
 $G : \text{Whole}$   
 $5 : 20$   
 $1 : 4$
- part-to-part ratio

### Three-Term Ratio

Tennis : Golf : Basket  
 $8 : 5 : 7$

Tennis : Golf } Tennis : Bask  
 $8 : 5$  }  $8 : 7$

Write each part-to-<sup>Total</sup>whole ratio as a ratio, a fraction and a percent.  
Round percents to 2 decimal places.



$$\begin{array}{l} \text{Bunny} \rightarrow 7 \\ \text{Turtle} \rightarrow 5 \\ \hline \text{Total} \rightarrow 12 \end{array}$$

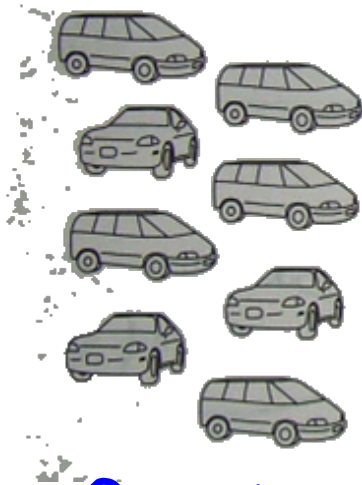
$$\begin{array}{l} \text{Bun: Total} \\ 7 : 12 \\ \frac{7}{12} \end{array}$$

$$\begin{array}{l} \text{Dec } 0.58\bar{3} \\ 58.\bar{3}\% \end{array}$$

$$\begin{array}{l} \text{Tur: Total} \\ 5 : 12 \\ \frac{5}{12} \\ 0.41\bar{6} \\ 41.6\% \end{array}$$

Write each part-to-part ratio.

a) cars to vans

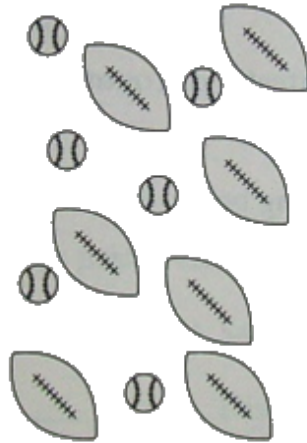


$$C : V$$

$$3 : 5$$

$$3 \text{ to } 5$$

b) footballs to baseballs



$$F : B$$

$$7 : 6$$

$$7 \text{ to } 6$$

c) bananas to fruit <sup>Total</sup>



$$\text{Ban} : \text{Total}$$

$$5 : 9$$

$$5 \text{ to } 9$$

$$\frac{5}{9}$$

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

$$\begin{array}{l} \text{a) Boy : Girl} \\ 16 : 15 \\ 16 \text{ to } 15 \end{array}$$

$$\begin{array}{l} \text{b) B : G : A} \\ 16 : 15 : 4 \\ 16 \text{ to } 15 \text{ to } 4 \end{array}$$

$$\begin{array}{l} \text{c) Adult : Total} \\ 4 : 35 \\ 4 \text{ to } 35 \\ \frac{4}{35} \end{array}$$

# Class/Homework

4 + 9, 11, 14

Homework pg. 266 # ~~1-3~~, 4-15

5:8

$\frac{5}{8}$

Pg 266  
5 ab  
6 abc  
7 ad  
8 ab

9 } tomorrow  
11 }  
14 }

## Attachments

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Quiz on Percents (Mid Unit Feb 25).pdf