What do you know about ratios?
Discuss advertisements on pg. 264 with students.

April 12, 2023

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 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
14 : 28
12 : 21

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.

$\frac{3}{4}$

$\frac{3}{4} \overset{\times 2}{\underset{\times 2}{}} = \frac{6}{8}$

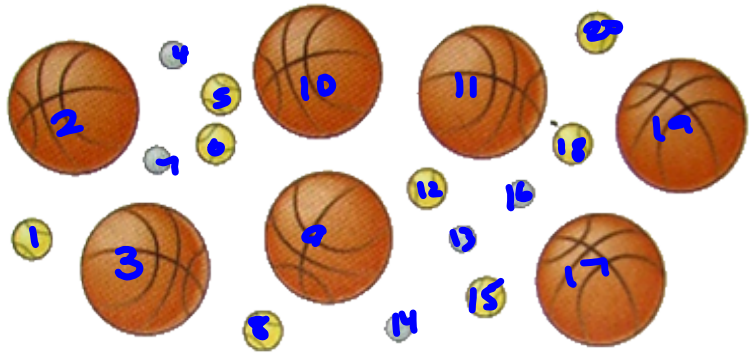
$\frac{3}{4} \overset{\cdot 3}{\underset{\cdot 3}{}} = \frac{9}{12}$

$\frac{3}{4} \overset{\cdot 4}{\underset{\cdot 4}{}} = \frac{12}{16}$

$\frac{300}{400}$

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

$= \frac{3}{4}$



Two-Term Ratio

1. part-to-whole ratio

Basketball : Total
7 : 20

Tennis to whole
8 : 20
÷4 ÷4
2 : 5

2. part-to-part ratio

Golf to tennis
5 : 8

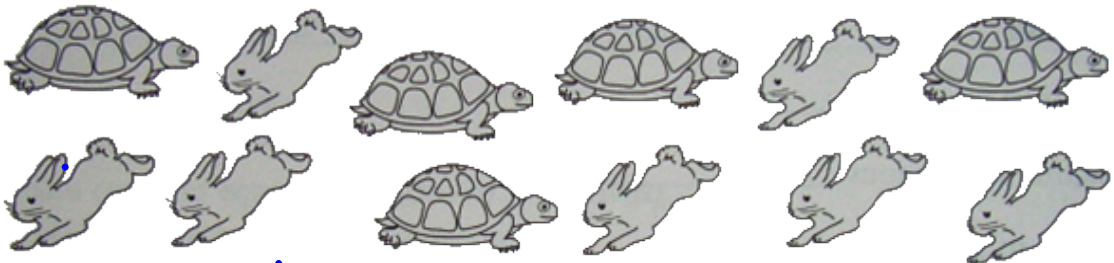
Tennis : Golf
8 : 5

Basket : Tennis
7 : 8

Three-Term Ratio

Bask : Tennis : Golf
7 : 8 : 5

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

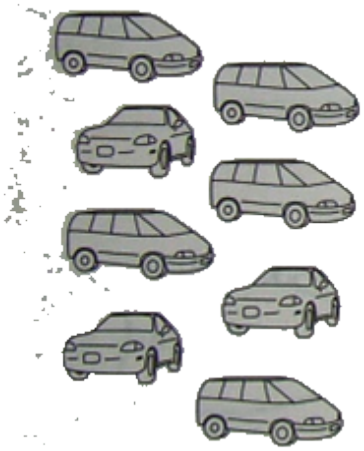


Rabbits : whole
7 : 12
7 to 12
$\frac{7}{12}$
↙ Decimal Top ÷ Bott
0.58
↓ x 100
58%

Turtle : whole
5 : 12
5 to 12
$\frac{5}{12}$
↘ 0.42
42%

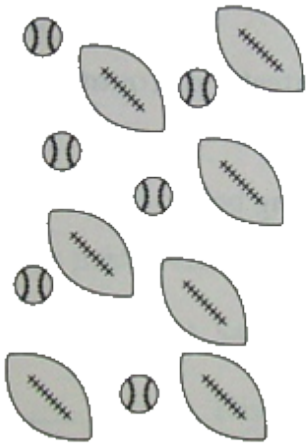
Write each part-to-part ratio.

a) cars to vans



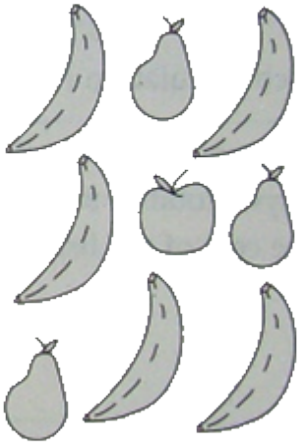
C : V
3 : 5

b) footballs to baseballs



F : B
7 : 6
7 to 6

c) bananas to fruit



B : Fruit
5 : 9
5 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

a) B : G
16 : 15

b) B : G : A
16 : 15 : 4

c) Adults : Total
4 : 35
4 + 35
$\frac{4}{35}$

Homework pg. 266 # 1,2, 4- 15

4 to 9
11 a(i, ii
14 abc

Attachments

Quiz on Percents (Mid Unit Feb 25).pdf