1. Click “File>Make A Copy” of this Doc,
2. Enter A New Document Name *YourName* RP A1 Ratio Notes.
3. Example: Pam Rickard RP A1 Ratio Notes
4. Click “File>Move To Folder,” click on your Math Folder, then MOVE to “share” it with me.

CCSS.Math.Content.6.RP.A.1 Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities. For example, “The ratio of wings to beaks in the bird house at the zoo was 2:1, because for every 2 wings there was 1 beak.” “For every vote candidate A received, candidate C received nearly three votes.”

Ratio Notes

Ratios show how two or more quantities or measurements are related.
A ratio is a pair of positive numbers (no negatives here!) which are both not zero.[1]

Terms and Units

1. *Each side of a ratio is called a term. 2:3 - 2 is a term. 3 is a term.*
2. *Ratios relate two measurements. These quantities can have same or different units.*

Examples

- Same units: 3 cups of apple juice to 2 cups of orange juice
- Different Units: 3 meters and 2 seconds

A ratio can be written three ways

1. A fraction	3/4	¾ of the class is boys or ¾ three girls for every four boys
2. With a colon	3:4	3:4 meaning 3 cats to 4 dogs
3. With the words “to,” “for every,” or “out of every”	Three to four Three for every four Three out of every four	For every 3 students in our class that have cats there are four who have dogs. or Three out of every four students are boys.

Ratio And Rate Language
Equivalent Ways Of Saying Ratios

- For every
- For each
- For each one
- Per

3 Types of ratios

Ratios can compare parts to parts or parts to total.

Parts to Parts There are 17 boys in the class and 13 girls. Write this as a ratio three ways.
Parts to Total There are 17 boys in the class of 30 students. Write this as a ratio three ways.
Rates Comparison between two measurements with different unit. Examples Miles per Hour, Mass to Volume is a rate. (More on this later)

Right now we will focus on Part to Part and Part to Total Ratios

Challenge!

Look at the table “A Ratio Can Be Written Three Ways. Can all three be for Parts to Parts? Parts To Whole? Be ready to share your ideas in our class discussion.

Common Mistake

A common mistake people make with ratios is to add parts to total to get the total.

For example, with the part to part ratio 4 girls to every 5 boys, the total number of students is 9.

With the part to total ratio 4 girls to every 9 students, the total number of students is 9, not 13! Be careful!

Notes

1 While it is possible to define ratio so that A can be zero, this will rarely happen in context, and so the discussion proceeds assuming both A and B are non-zero.