

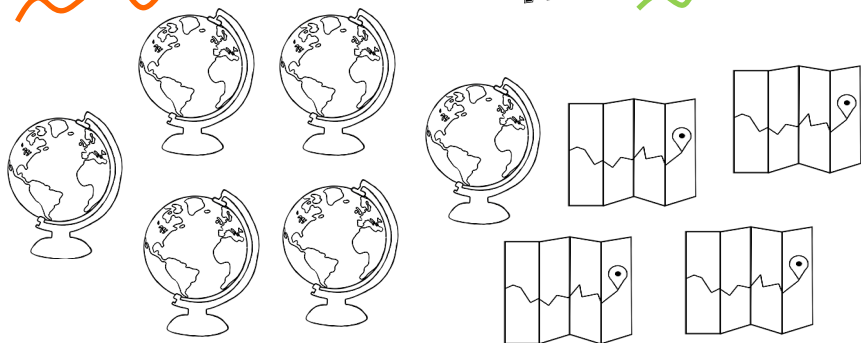
Ratios

AND PROPORTIONS:

a comparison of two quantities by division

an equation stating that two ratios are equal

Ex: $\frac{2}{7} = \frac{4}{14}$



There are 10 navigational items.

There are 6 globes.

There are 4 paper maps.

For every 2 paper maps, there are 3 globes.

RATIOS CAN BE EXPRESSED 3 WAYS:

Written Form:

Paper Maps to Globes

2 to 3
2 for each 3
2 for every 3

Odds Notation:

2 : 3

Fractional Notation:

$\frac{2}{3}$

IMPORTANT:

FRACTIONS AND RATIOS ARE NOT THE SAME!

Fractions: represent a part,
represent ONE number



Ratios: represent a comparison of TWO quantities



RATIOS CAN COMPARE QUANTITIES 3 WAYS:

PART to PART:

Paper Maps to Globes

2 to 3
2 : 3
 $\frac{2}{3}$

PART to WHOLE:

P.M. to All | Globes to All

4 to 10 | 6 to 10
4 : 10 | 6 : 10
 $\frac{4}{10}$ | $\frac{6}{10}$

WHOLE to PART:

All to P.M. | All to Globes

10 to 4 | 10 to 6
10 : 4 | 10 : 6
 $\frac{10}{4}$ | $\frac{10}{6}$

IMPORTANT:

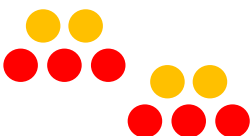
ORDER MATTERS!

Pay attention to the wording! Your ratio quantities must stay in order to make sense!

RATIOS CAN BE VISUALLY REPRESENTED SEVERAL WAYS:

Models:

Paper Maps to Globes

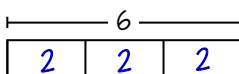


Ratio Tables:

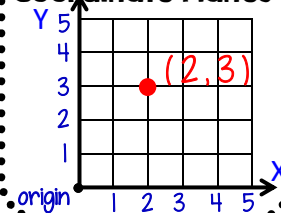
P.M.	2	4	6
G.	3	6	9

Tape Diagrams:

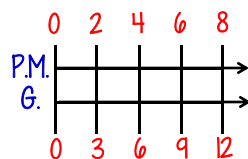
There are 3 globes for every 2 maps. If there are 6 globes, how many maps are there?



Coordinate Planes:



Double Number Line:



Some models may be better for different scenarios. You may prefer to use one model over another. That's fine! However! **You need to be familiar with all models. If you fully understand ratios, then you will fully understand every model! Models are just tools!**