**Ratio Notes:**  
**Part to Part and Part to Whole**

**Part to Part:** is a ratio that represents the relationship of one **part** of a whole to another **part** of the same whole.

* For example: 🍎🍎🍎🍎🍒🍒🍒🍇🍇🍇🍇🍇

In the example above you see apples, cherries and grapes.

What is the ratio of…..

* apples to cherries: 4 to 3
* Cherries to grapes: 3 to 5
* Apples to cherries and grapes: 4 to 8

These are all examples of a “Part to Part” ratio. We are comparing a **part** of this whole group to another **part** of the whole group.

**Part to Whole:** is a ratio or a fraction that represents a relationship between a **part** and the **whole group**

* Using the same fruit example: 🍎🍎🍎🍎🍒🍒🍒🍇🍇🍇🍇🍇

What is the ratio of…..

* Apples to all the fruit: 4 to 12
* Cherries to all the fruit: 3 to 12
* Apples, cherries and grapes to grapes: 12 to 5

These are examples of part of the whole compared to the whole group.

NOTE: You cannot link items that are not similar. So, I would not be able to state 3 dogs and 2 apples as a part to whole. Dogs and apples are not the same.

**Another example:** 🐵🐵🐵🐶🐶

* There are 3 monkeys and 2 dogs. I could find the ratio of monkeys to dogs, which would be 3:2. This would be an example of part to part.
* Or I could find the ratio of monkeys to animals. This would be 3 to 5. Monkeys to animals would be a part to whole ratio.

**RATIOS IN MY LIFE:**

1. Pick a minimum of 10 Part-to-Part ratios that you have around in your life. For example: people in your house, pets, plants, cars, toys, electronics video games, pens, pencils, forks, spoons, etc.
   1. Explain each ratio in **words** (ex. Number of adults to kids in my family)
   2. Represent each ratio in **3 different ways** (ex. 2:3, 2/3, and 2 to 3)
   3. List **2 equivalent ratios** to your original ratio (ex. 2:3 = 4:6 and 20: 30)
2. Pick a minimum of 5 Part-to-Whole ratios that you have around in your life. For example, the number of blue LEGO bricks to all the LEGO bricks.
   1. Write each ratio as a **Part-to-Whole ratio**, explain each in **words** (ex. Blue LEGO bricks to all LEGO bricks)
3. Present this information in a style of your choosing. It could be a small poster, a booklet, a powerpoint or word document, a video, or...? Remember you will need to share your project with your teacher, in a way that we can view it!
4. Note: there is an **optional video** on part to whole ratios available through Khan Academy: https://www.khanacademy.org/math/cc-sixth-grade-math/cc-6th-ratios-prop-topic/cc-6th-ratio-word-problems/v/ratios-as-fractions