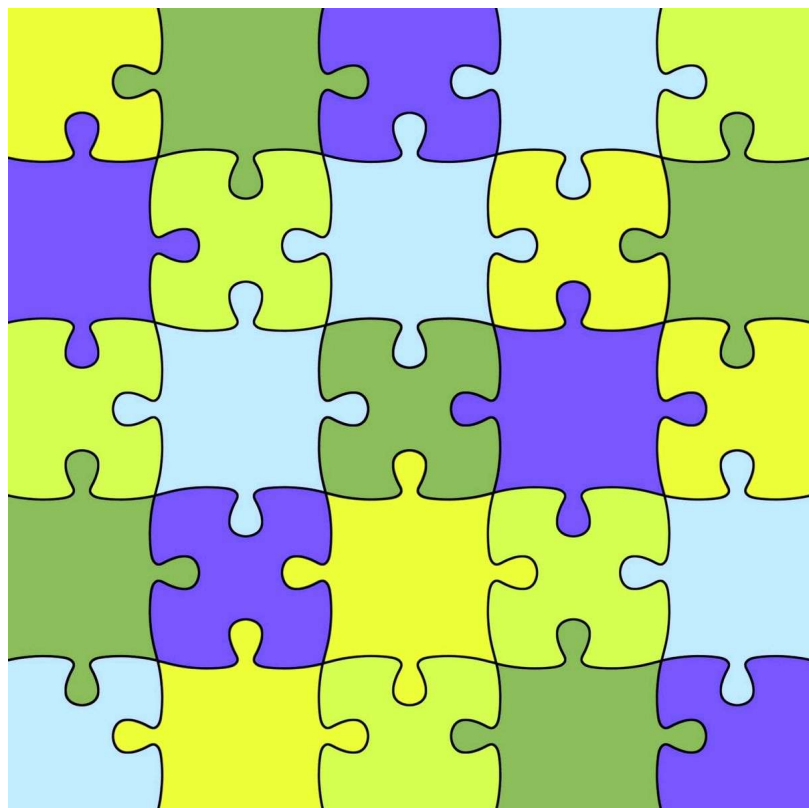


Understanding Ratio

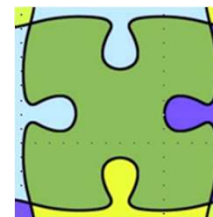
Cue Cards

The Language of Ratio

The **whole** is the *entire amount* you are looking at.

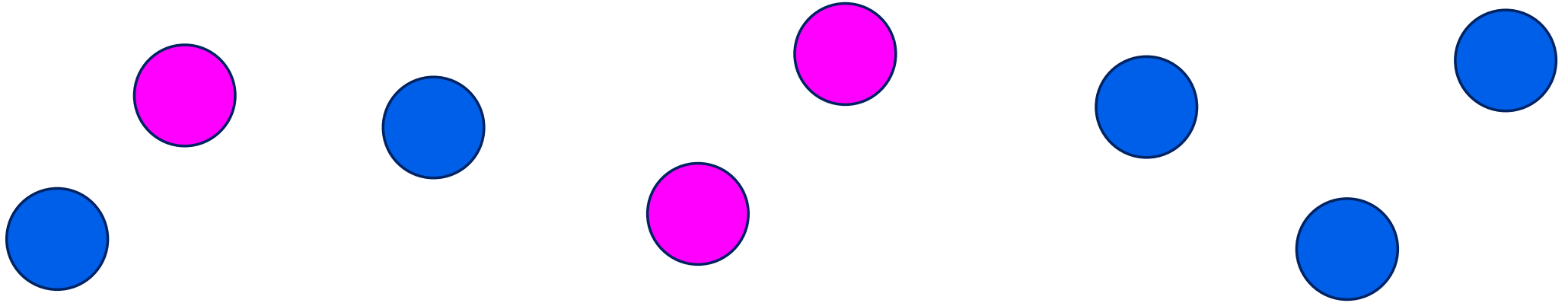


A **part** is a *piece* of the whole.



The Language of Ratio

A ratio is a way of comparing amounts. It tells you how much of one thing there is compared to another thing. You can compare: part to part → one type of thing compared with another type, and part to whole → one type of thing compared with the total amount. We use the ratio symbol – colon (:) – to show the relationship between the parts.



There are **3 pink** counters.

There are **5 blue** counters.

The ratio of **pink** to **blue** counters is **3 : 5** (part to part).

3 out of the **8 counters** are **pink** (part to whole).

5 out of the **8 counters** are **blue** (part to whole).

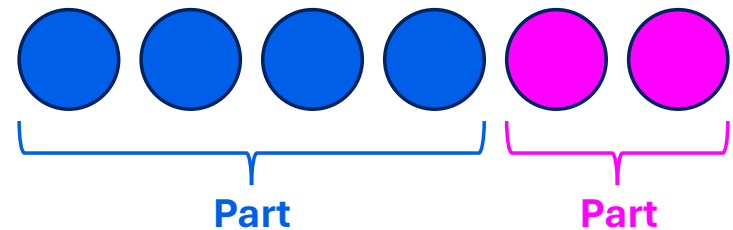
Working Out Ratio

A ratio shows how two or more amounts compare. It is usually written $a : b$, where a and b are whole numbers.

How to work out ratio:

- **Identify the parts** in the question. It may help to draw a picture.
- **Identify the order** in which the parts are to be written.
- **Write the ratio** using a colon.

Example: There are 4 blue counters and 2 pink counters. What is the ratio of blue to yellow?



Blue to pink
 $4 : 2$

Simplifying Ratios Using Objects and a Ratio Table

Simplifying ratios means finding the largest number of equal groups that all parts of the ratio can be split into evenly, with nothing left over.

How to simplify ratios:

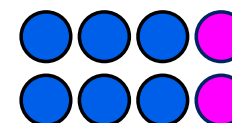
- **Build it.** Show the ratio using counters, cubes or dots so you can see each part clearly.
- **Group it.** Find the largest number of equal groups you can make.
- **Use a ratio table.** Transfer the original ratio and the simplified ratio into a table.
- **Show the pattern in the table.** Look at how the numbers changed. By what factor did both sides shrink?
- **Write the simplified ratio.**

Example: There are 6 blue counters and 3 pink counters. Write the ratio of red to blue counters and check if it can be simplified?



Blue to pink

6 : 3



3 : 1

	Blue	Pink	
÷ 2	6	3	÷ 2
	3	1	

The simplified ratio is 3 : 1