

# Counting Project

Main purpose of the project is to develop children's cardinality in counting and consequently deepen their knowledge of number.

# Understanding cardinality

- Subitising
- Verbal counting
- Object counting

## The Counting principles

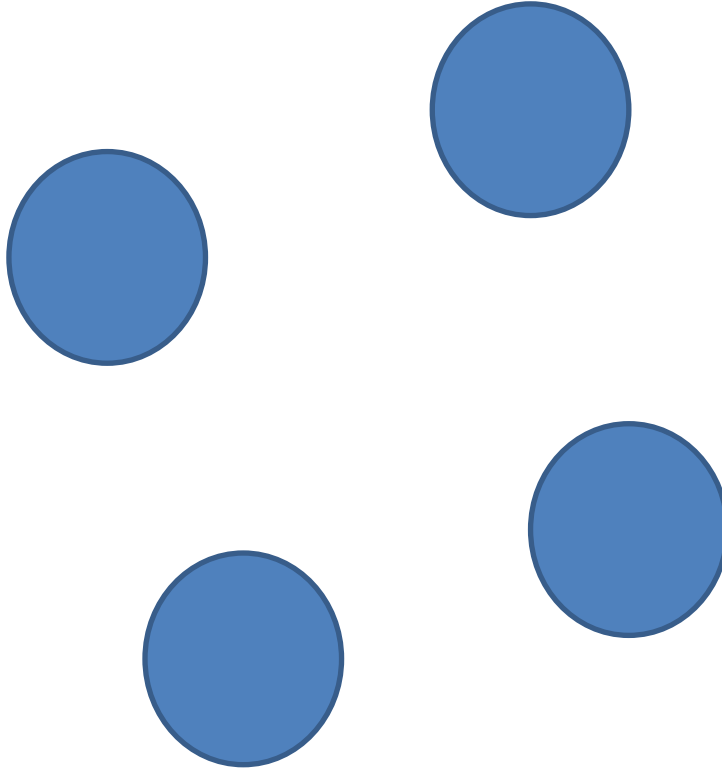
- Number conservation
- Hierarchical inclusion

# Subitising

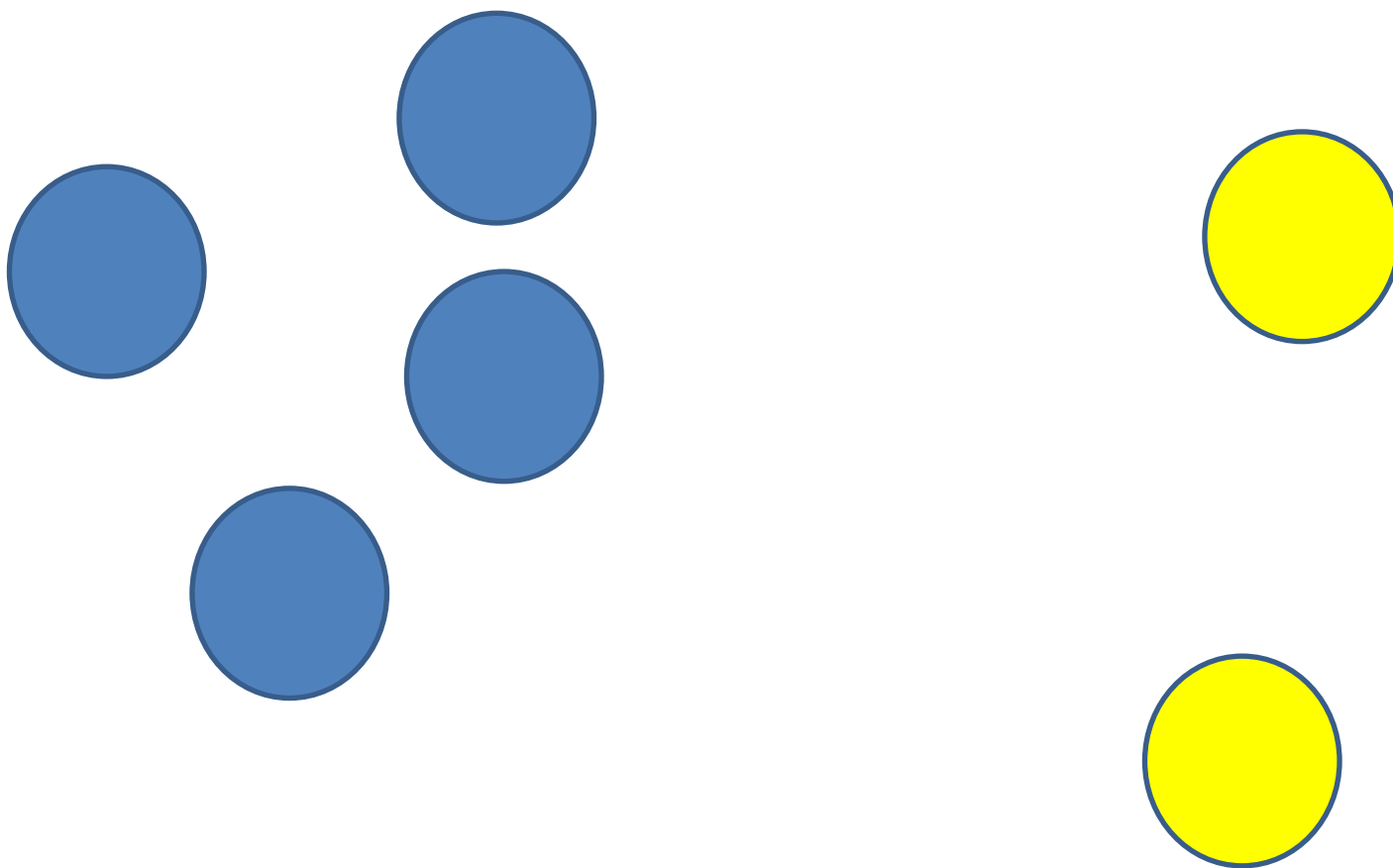
Visually recognising the number of items in a small set without counting

- Perceptual subitising Recognising a quantity without using other mathematical processes.
- Conceptual subitising Recognising the number pattern as a composite of parts and whole- leads on to part part whole model

Perceptual subitising- tends to be up to 5 objects.



# Conceptual subitising



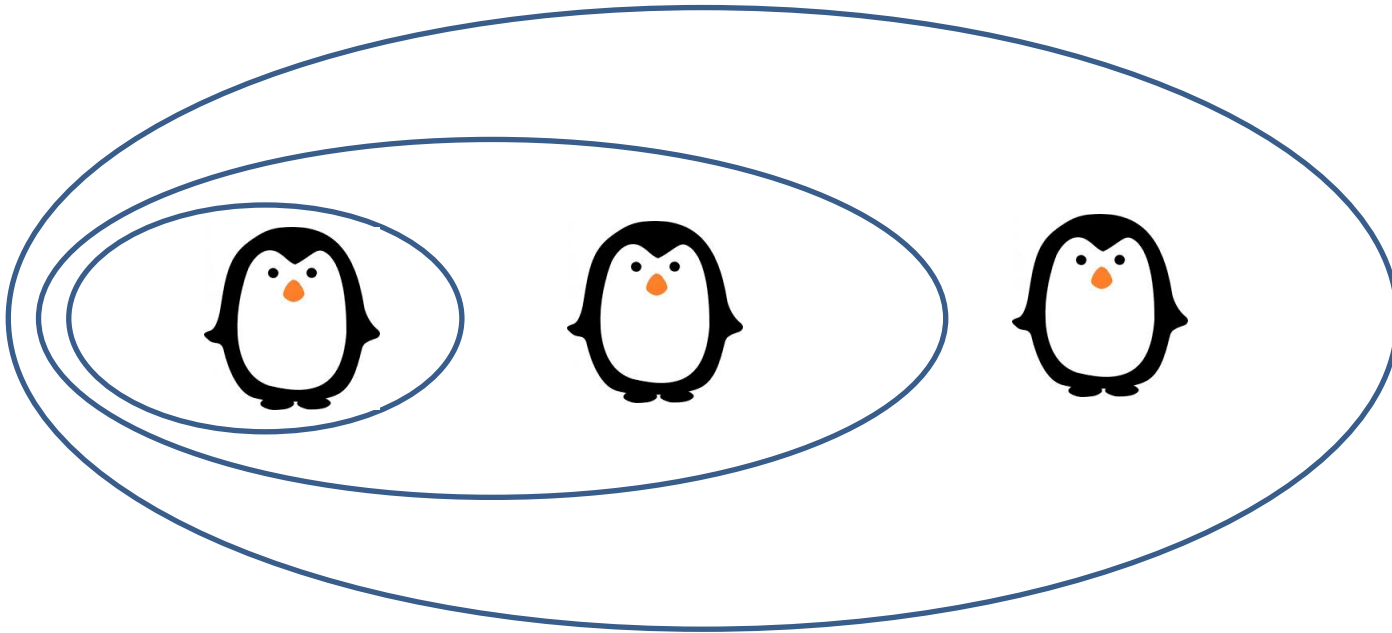
# Verbal counting

- String level- continuous undifferentiated sound string: wuntoofreeforfive (not segmented into words- not objects of thought, not suitable for 1:1 correspondence)
- Unbreakable list –each word is distinct but children can't begin at any point other than one
- Breakable list- can say the words from any point in the word list
- Counting requires children to understand that the last number in the counting sequence represents the quantity of the set.

# Hierarchical inclusion

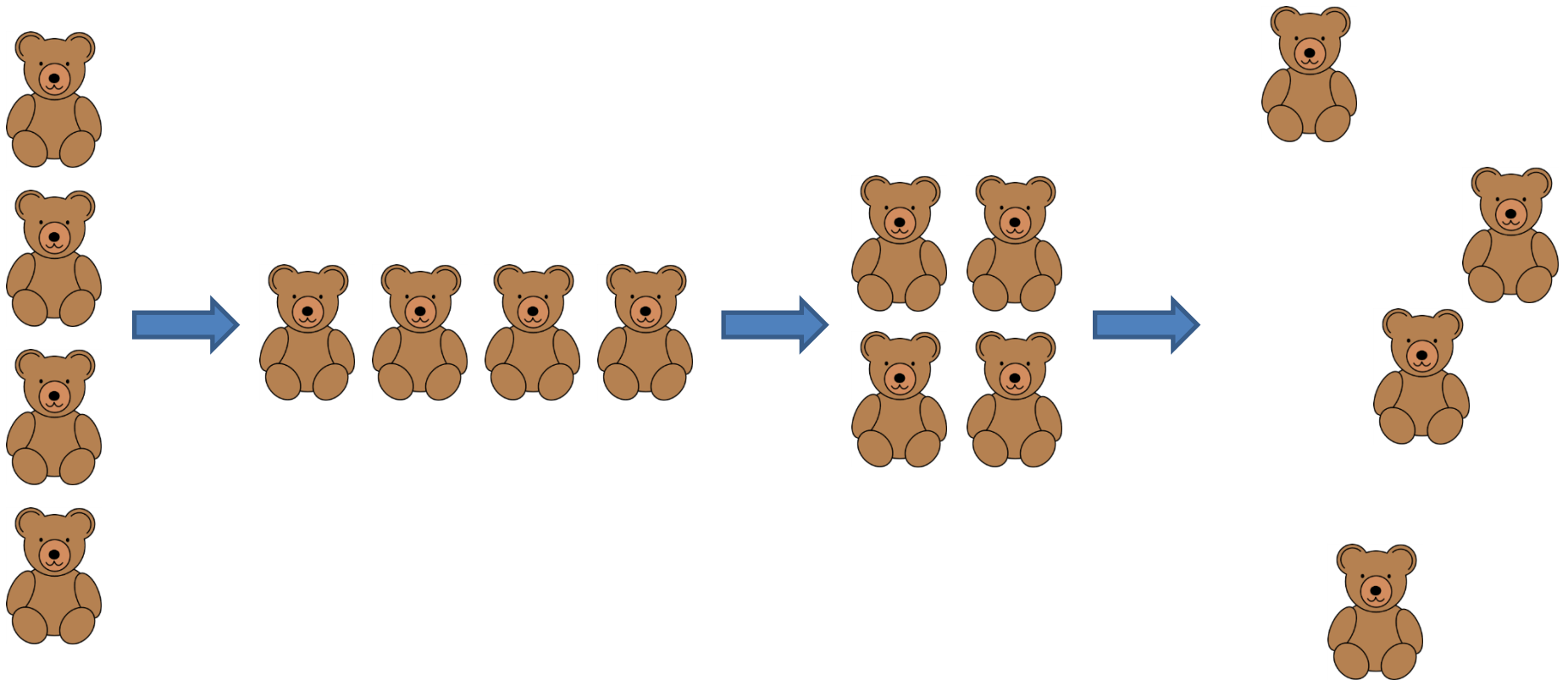
A number contains all of the previous numbers.

This allows children to compare numbers and explain why 3 is greater than 2.



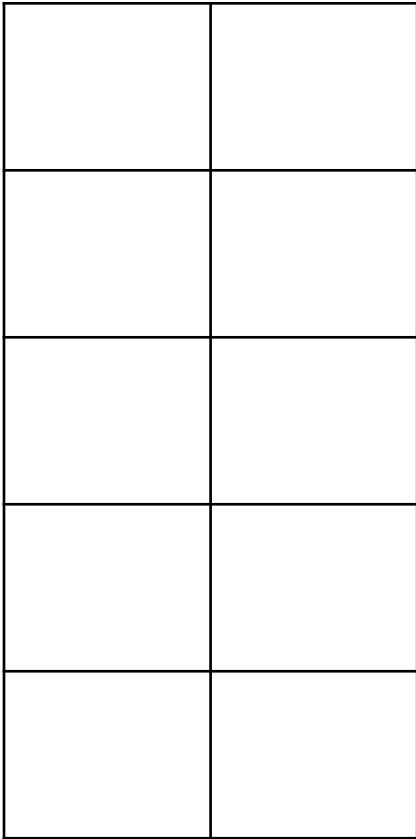
# Number Conservation

- The children are able to count a group of objects and know that there is the same number of objects whatever form they are in.





# Ten frames or cups?



Allows children to compare numbers to 10 or multiples of 10.

Counting in steps of equal sizes is based on the big idea of 'unitising'; treating a group of, say, five objects as one unit of five.

# Don't Count Calculate!

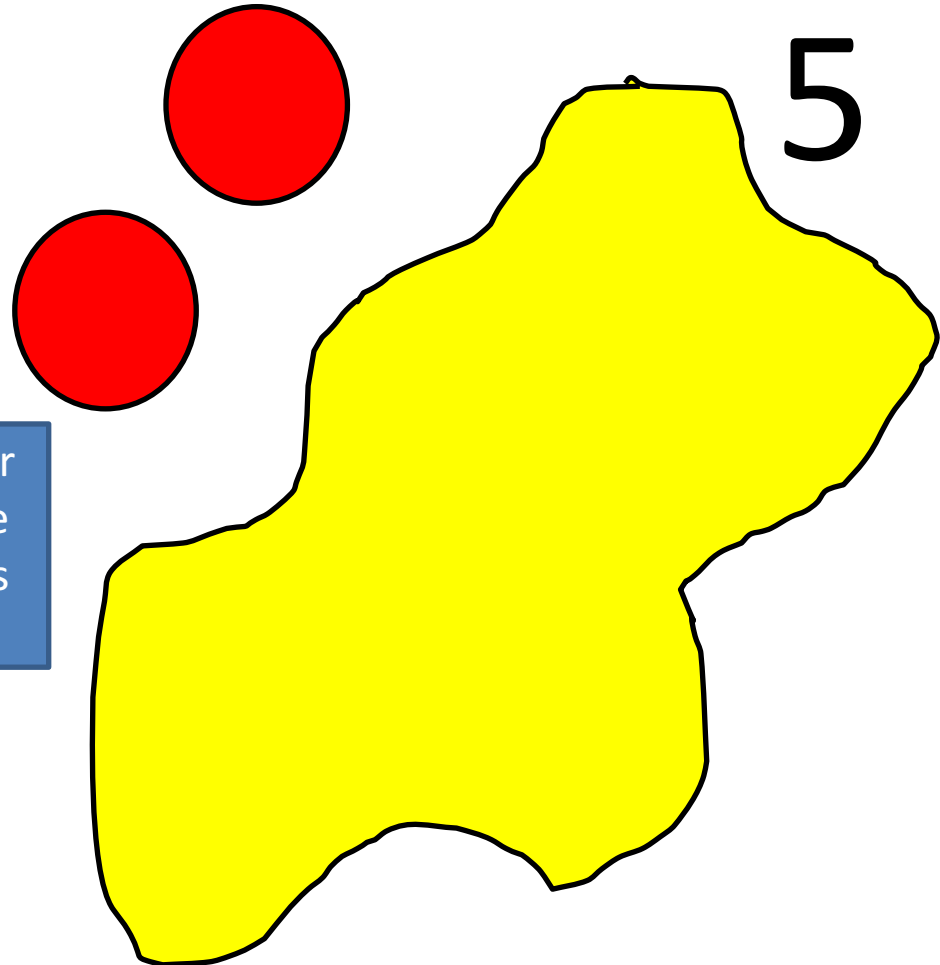
How many dots do you see?

How many dots are under the splat? How do you know?

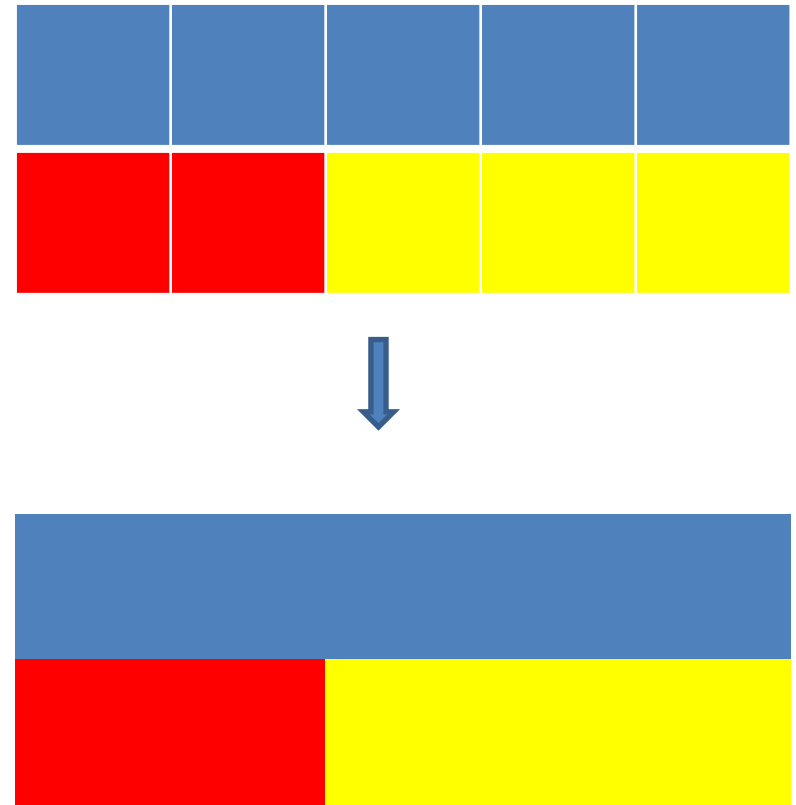
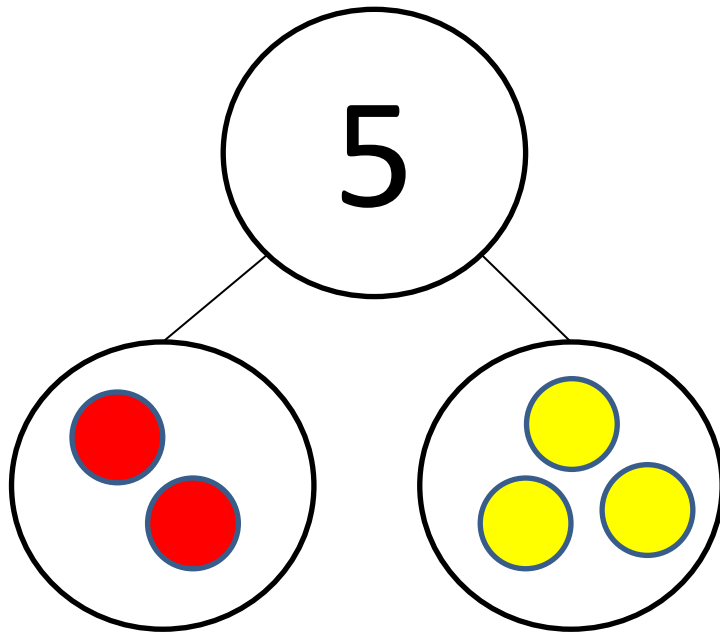
How else could you know?

Let's look under the splat to see how many dots are there.

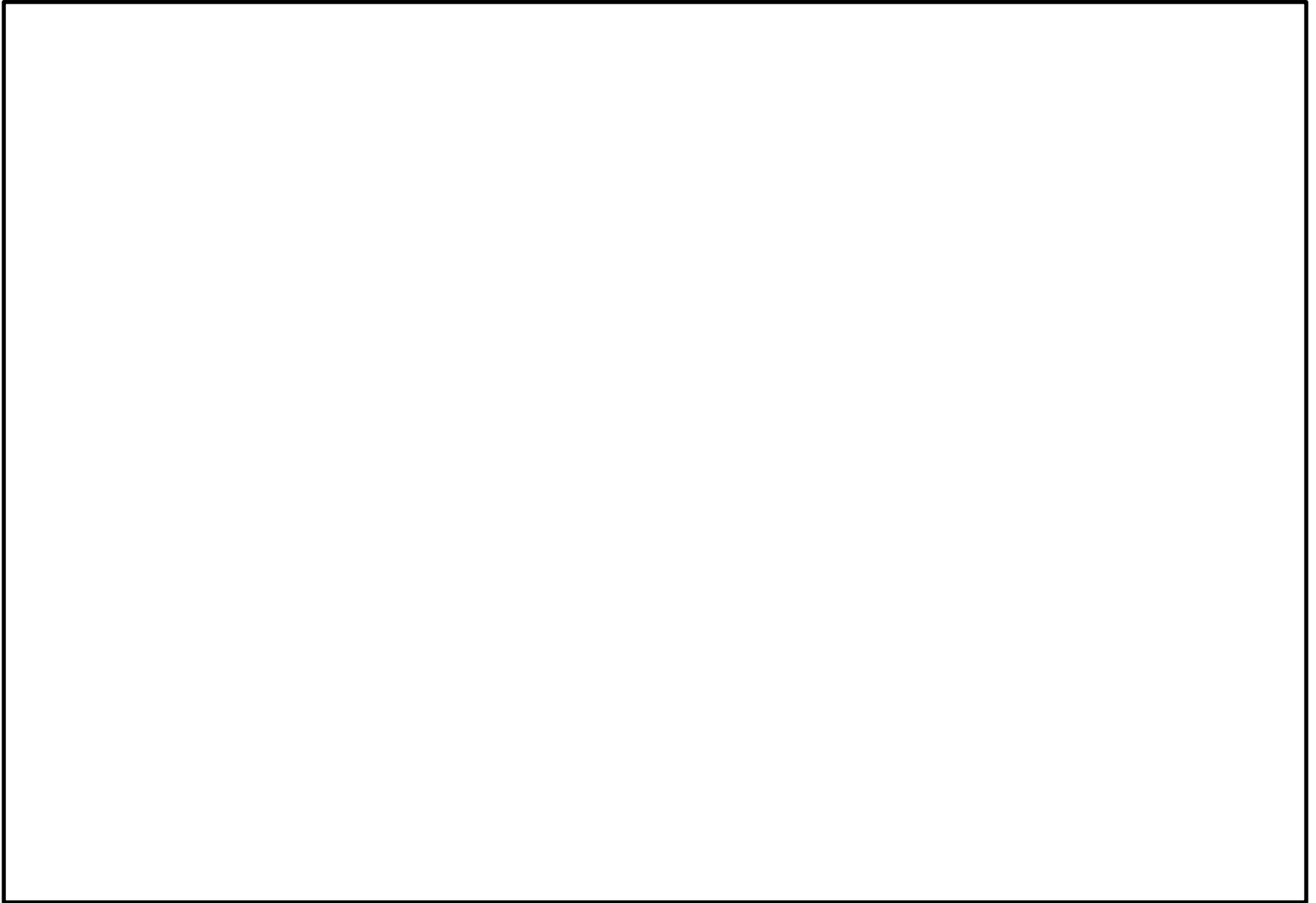
What can we learn from this picture?



# Part part whole model



# How many?



# How many?


# How many?



