10 Keys to Counting

@mathswithin10

Maths Within

1) Stable Order Principle

Numbers are always said in the same order.

1, 2, 3, 4, 5, 6, 7, 8, 9, 10.....

2) 1:1 Correspondence Principle

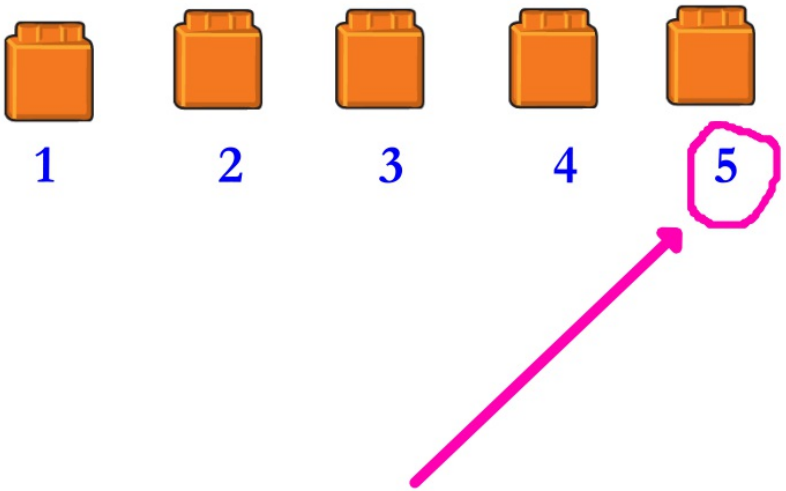
We always count one number for one object.



1 2 3 4 5

3) Cardinality Principle

The last number we say tells us how many there are.

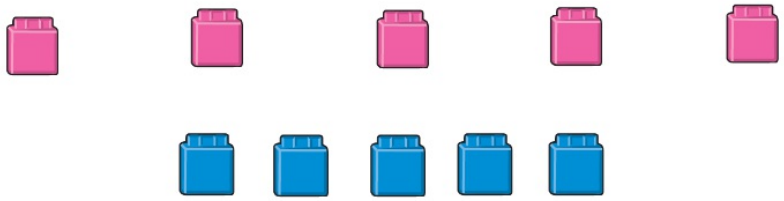


There are 5 in the set.

4) Invariance of Number Principle

How objects are arranged doesn't affect how many there are.

Which line has more?
Pink or blue? Now check...



5) Abstraction Principle

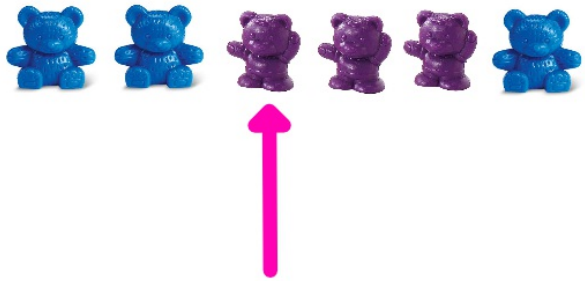
We can count different sets within the same set.

How many objects?
How many balls?
How many blue objects?
How many blue balls?



6) Order Irrelevance Principle

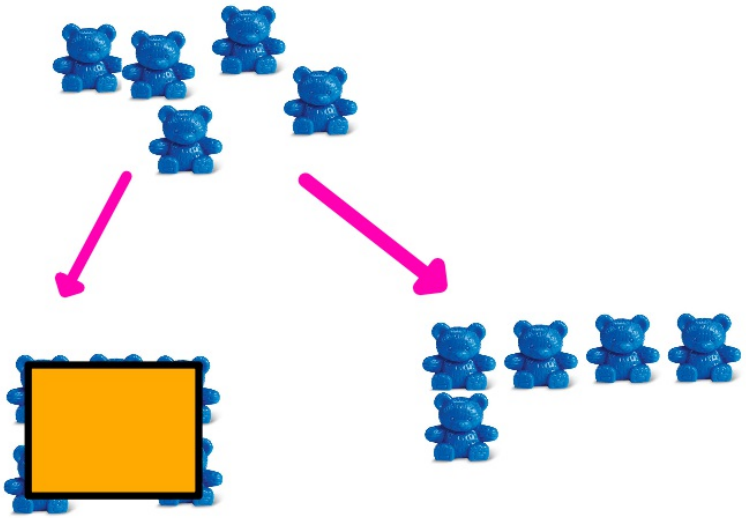
We can count a set in any order, starting anywhere.



Let's make this bear number 1.

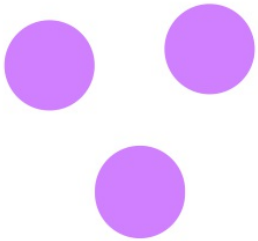
7) Conservation of Number Principle

Once counted, the total never changes, even if objects are covered up or rearranged.

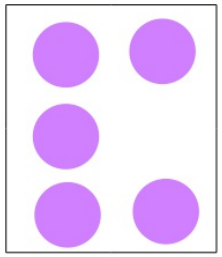


8) Subitising

Sometimes we don't need to count. Our brains learn to just 'see' small quantities. This is **perceptual subitising**.



Later, we use this to recognise larger numbers. We see, for example, 3 and 2 making 5 in total. This is **conceptual subitising**.



9) Counting Larger Sets

We need strategies to count larger sets as efficiently as possible.

- **Cross items off**
- **Move items into a line**
- **Move items to side once counted**
- **Count from left to right**
- **Count from top to bottom**



10) Counting Backwards

We need to count backwards as well as forwards.

