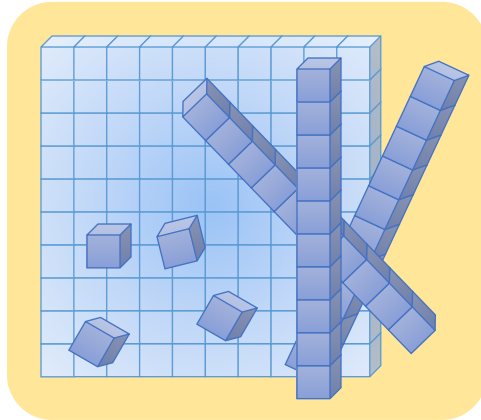


# PLACE VALUE AND NUMBER NAMES

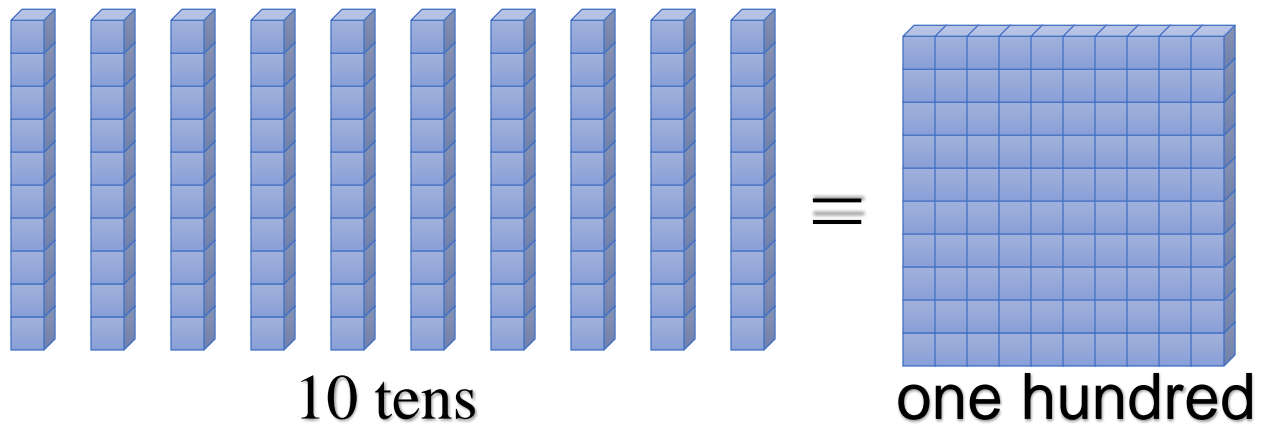
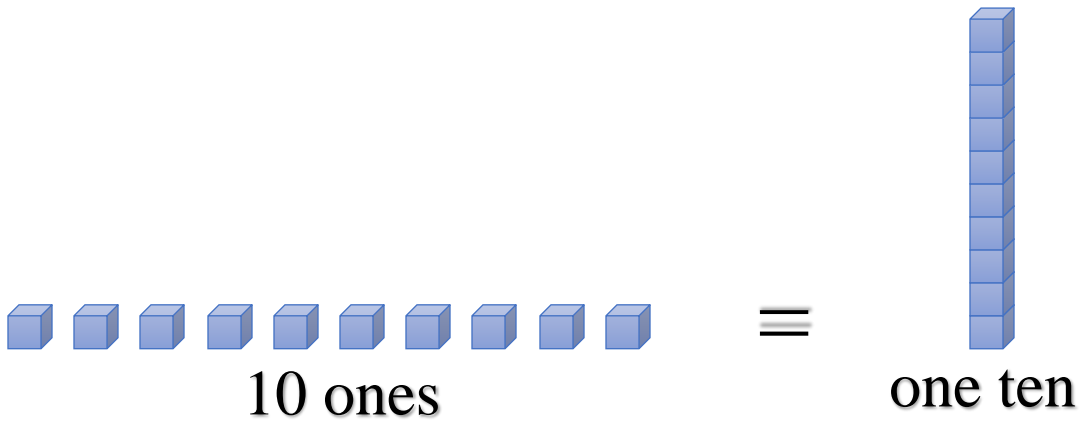
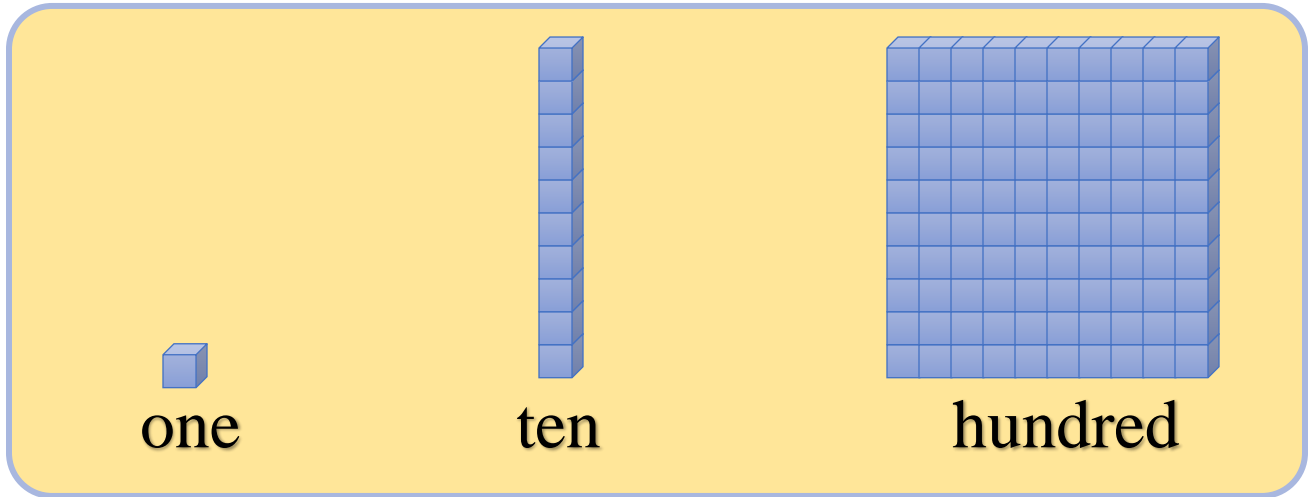


## Unit Overview

This unit focuses on place value. We will explore the various ways you can express a number.

# Place Value and Number Names

Below is a model for the ones, tens and hundreds.

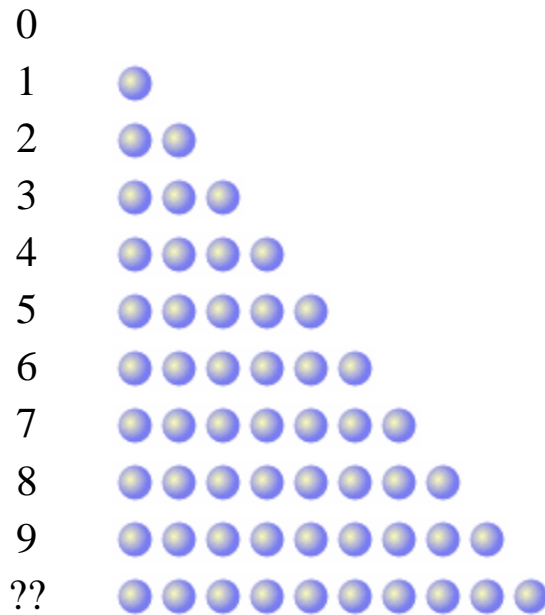


## The Ten Digits

The Digits we use today are called "Hindu-Arabic Numerals" and look like these:

**0 1 2 3 4 5 6 7 8 9**

We can use these on their own to count up to 9:

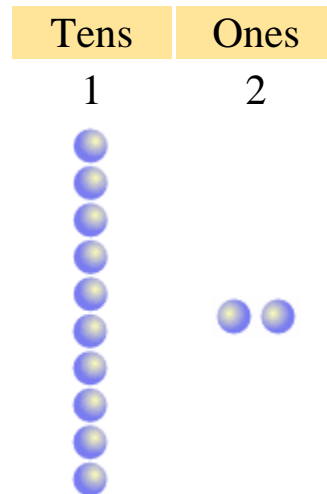


But what happens after 9?

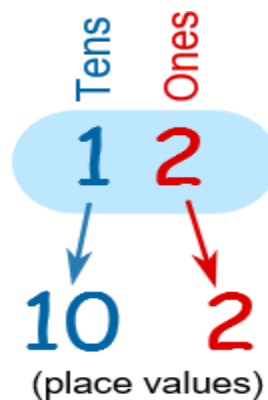
## Ten or More

When we have more than 9 items, we start **another column** - the "tens" column - and we write down how many "tens" we have, followed by how many "ones" (also called "units").

*Example:* this is how we write down **twelve**:



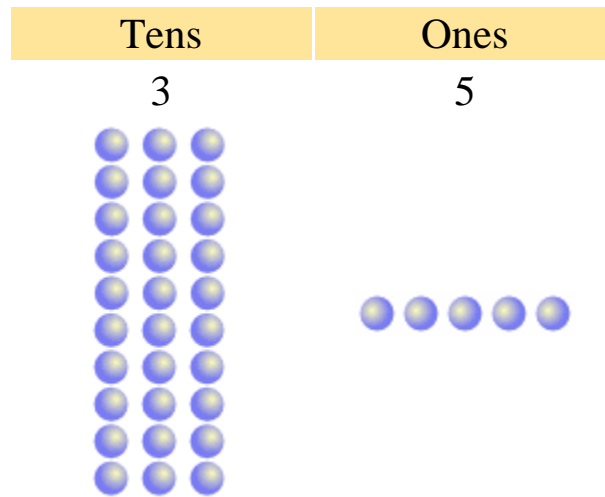
The Number "12"



It says we have **1 Ten** and **2 Ones**, which makes 12.

This can also be written as  $1 \times 10 + 2 \times 1$ .

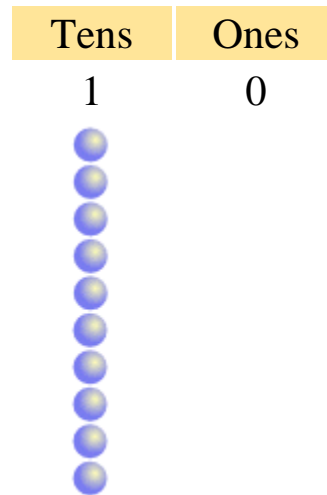
*Example:* "35" means 3 Tens and 5 Ones, which is also  $3 \times 10 + 5 \times 1$



The Number "35"

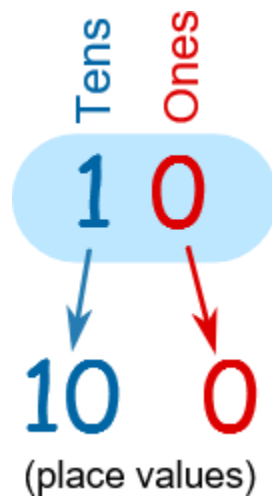
## Zero

What if we have 1 Ten, but no Ones? We show "no Ones" by **putting a zero** there:



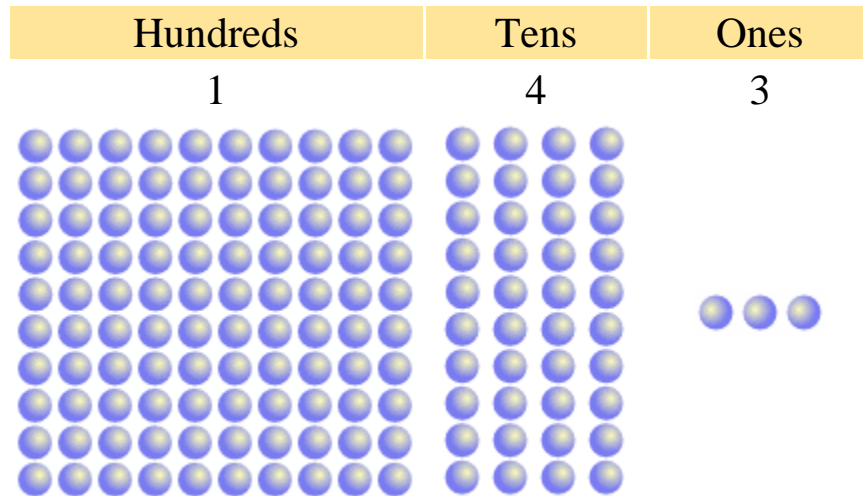
The Number "10"

We have to put a Zero in the Ones place or "10" looks like "1".



## A Hundred or More

When we have more than 99 items, we start **another** column - the "hundreds" column. Now we need to show how many Hundreds, Tens and Ones:



The Number 143

That shows we have 1 Hundred, 4 Tens and 3 Ones:

- The **Place Value** of the "1" is **100**
- The **Place Value** of the "4" is **40**
- The **Place Value** of the "3" is **3**

This can also be written as  $1 \times 100 + 4 \times 10 + 3 \times 1$ .

## Names of Each Column

Each time we want to show a bigger number we just add one column **to the left** and we know it is always **10 times bigger** than the column on its right.

Each new column on the left is ten times bigger! So, where we **PLACE** a digit is important!

These are the names of each column:

Millions	Hundred- Thousands	Ten- Thousands	Thousands	Hundreds	Tens	Ones
----------	-----------------------	-------------------	-----------	----------	------	------

Click on the link to watch the video "[Finding a number's place value](#)".

