

















# Punctuation marks

 comma	 semicolon	 colon	 full stop	 exclamation mark	 question mark
 apostrophe	 quotes	 double quotes	 hyphen	 dash	
 stroke or slash	 parentheses or (round) brackets	 square brackets	 ellipsis	 asterisk	

# Digits and figures

- a digit
- single digit numbers : 1, 2, up to 9
- double digit numbers : 11, 26,
- a figure is a single digit in a given number.  
25,690 has ...figures. It is a \_\_\_\_\_ number.

If a person says he/she gets a six-figure salary, we usually talk about yearly earnings above \$100,000 and below \$1,000,000

brackets :  $()\{\}\square\langle\rangle$

from french *braguette*

- $()$  round brackets, or parentheses
- $\square$  square brackets
- $\langle\rangle$  angle brackets, no use in highschool maths.
- $\{\}$  curly brackets, like in curly hair, used to describe **sets**

we say

- curly hair = *cheveux bouclés*
- a makeup set = *ensemble/kit de maquillage*
- a theater set = *décors de théâtre*

sets ; whole numbers are positive integers

- counting numbers  $\mathbb{N}^* = \{1, 2, 3, \dots\}$
- whole numbers :  $\mathbb{N} = \{0, 1, 2, 3, \dots\}$
- integers  $\mathbb{Z} = \{\dots - 3, -2, -1, 0, 1, 2, 3, \dots\}$
- decimals  $\mathbb{D}$
- real numbers  $\mathbb{R}$

be accurate : in french whole numbers are *nombres entiers positifs*

## even or odd numbers

- even numbers 2, 4, 6, ... can be divided exactly by two.
- odd numbers 1, 3, 5, ... are numbers that will have a remainder of 1 when divided by 2.

Non-mathematics use :

- He was perfectly relaxed, speaking in an **even** tone (*calm and controlled*)
- The room is kept at an **even** temperature (*not changing*)
- There is something **odd** about him. (*strange, unusual*)
- an **odd**-looking house
- the **odd** one out (*l'intrus*)

## a factor and a multiple

- 4 is a factor of 12.
- 3 is a prime factor of 12.
- a prime number has exactly two factors.
- $12 = 4 \times 3$  is a composite number
- 12 is a multiple of 3
- $2 \times 2 \times 3$  is a prime **factorization** of 12.

be aware words with **-ise, -ize (-isation, -ization)** : prioritize, mischaracterize, deinustrialize, conceptualize, hypersensitized  
Oxford english dictionary recommends using **-ize** which has proper latin origin (while -ise is correct, but comes from the French).

# How can you identify two-digit prime numbers ?



The sieve of Eratosthenes  
*le crible d'Eratosthène*

If a two-digit number is not a multiple of 2, 3, 5 or 7, then it is a prime number.

Obviously, if any number is a multiple of 2, 3, 5 or 7, then it is not a prime number.

<https://isthisprime.com/game/>

in cooking : sifter (sieve) vs strainer





# operations

- $2 + 2$  "two plus two"
- $24 - 13$  "twenty four minus thirteen"
- $12 - 7$  "subtract seven from twelve"
- $13 - 5$  "thirteen take away five"
- $15 \times 17$  "fifteen times seventeen", multiply is correct.
- $15 \div 3$  "fifteen divided by three"
- $\frac{15}{3}$  "fifteen over three"
- $3^2$  "two squared"
- $5^3$  "five cubed"
- $4^{10}$  "four to the power 10"

This phone number called me three **times**.

*subtract* is obsolete and erroneous : latin is subtrahere.

# Simple mathemagic trick : reading minds with your phone

- keep multiplying **single digits numbers** to get a big long number in the millions or billions.  
Pick them as **randomly** as possible.
- Chose a single digit of the result.  
Point at it and show it to your neighbour  
This is your secret digit.
- Tell me all the other digits.

## a math puzzle

Using all characters one time each, write down a true equation.

$$2 \quad 3 \quad 4 \quad 5 \quad + \quad =$$