

Episode AP04

Different kinds of numbers

European section, Season 1

Natural numbers

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A **natural number** is one that can be found in nature. It has no decimal part and no sign. The smallest natural number is 1.

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Examples : 2 ; 67 ; 10989

Whole numbers

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A **whole number** is a positive number with no decimal part.

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Examples : 5 ; 436 ; 0

Integers, negative, positive

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An **integer** is just a number with no decimal part. It's **positive** (sign $+$) if it's greater than 0 and **negative** (sign $-$) if it's lower than 0.

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Examples : -756 ; $+10$; -77

Even numbers

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An integer is **even** if it's **divisible** by 2, or equivalently if it can be cut in two equal integer parts.

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An integer is **even** if it's **divisible** by 2, or equivalently if it can be cut in two equal integer parts.

Examples : 2 ; 52 ; -7008

Odd numbers

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An integer is **odd** if it's not even, that is if it's not a **multiple** by 2.

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Examples : -3 ; 17 ; 101

Prime numbers

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Examples : 7 ; 31 ; 47.

Decimal numbers

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Examples : 12 ; -7.52 ; 15.51

Rational numbers

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A **rational number** is a number which can be expressed as a ratio of two integers.

Non-integer rational numbers (commonly called **fractions**) are usually written as the vulgar fraction $\frac{a}{b}$, where b is not zero. a is called the **numerator**, and b the **denominator**.

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Examples : $\frac{17}{3}$; -45 ; $-\frac{47}{5}$

Irrational numbers

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Examples : π ; $\sqrt{2}$; e

Real numbers

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Examples : 42 ; $-\frac{23}{129}$; π

