

Lessons of mathematics in English

# Mathematical operations

Helena Čížková  
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## Mathematical operations

### Addition or summation

$$a + b$$

The addition of two natural numbers is the total amount of those quantities combined

### Subtraction

$$a - b$$

Subtraction is a mathematical operation that represents the operation of removing objects from a collection

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## Mathematical operations

### Multiplication

$$a \cdot b$$

The multiplication of two numbers is equivalent to adding as many copies of one of them

### Division

$$a : b$$

The division of two natural numbers is the process of calculating the number of times one number is contained within one another

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## Mathematical operations

### Exponentiation

$$a^2$$

Exponentiation corresponds to repeated multiplication of the base

### Evolution

$$\sqrt{a}$$

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## Calculation results

### Addition

summand + summand = **sum**

addent + addent = **sum**

### Subtraction

minuend – subtrahend = **difference**

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## How to read arithmetic examples

Work out the sum and the difference of 8 and 6.

$$8 + 6 = 14$$

↑            ↑  
plus        equals

The sum of 8 and 6 is 14.

$$8 - 6 = 2$$

↑            ↑  
minus        equals

The difference of 8 and 6 is 2.

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## Calculation results

Multiplication

factor . factor = **product**

Division

dividend : divisor = **quotient**

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## How to read arithmetic examples

Work out the product and quotient of 8 and 4.

$$8 \cdot 4 = 32$$

↑                    ↑  
times            equals

The product of 8 and 4 is 32.

$$8 : 4 = 2$$

↑                    ↑  
divided by        equals

The quotient of 8 and 4 is 2.



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## Calculation results

Exponentiation

$$\textit{base}^{\textit{exponent}} = \textit{power}$$

Evolution

$$\textit{degree} \sqrt{\textit{radicant}} = \textit{root}$$

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## How to read arithmetic examples

Work out the second power of 4.

$$4^2 = 16$$



four to the power 2  
four to the second power  
four squared

The second power of 4 is 16.

Work out the third power of 4.

$$4^3 = 64$$




four to the power 3  
four to the third power  
four cubed

The third power of 4 is 64.

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## How to read arithmetic examples


Work out the square root of 4.

$$\sqrt{4} = 2$$


square root of 4  
the second root of 4

The second root of 4 is 2.

Work out the cube root of 8.

$$\sqrt[3]{8} = 2$$


cube root of 8  
the third root of 8

The third root of 8 is 2.

# Zdroje

<https://www.mathsisfun.com/exponent.html>

<https://www.mathsisfun.com/numbers/nth-root.html>

<https://en.wikipedia.org/wiki/Exponentiation>

<https://en.wikipedia.org/wiki/Addition>

<https://en.wikipedia.org/wiki/Subtraction>

<https://en.wikipedia.org/wiki/Multiplication>

[https://en.wikipedia.org/wiki/Division\\_\(mathematics\)](https://en.wikipedia.org/wiki/Division_(mathematics))