



Gymnázium, Brno, Slovanské nám. 7

WORKBOOK

<http://agb.gymnaslo.cz>



Subject: Mathematics

Student:

School year:/.....

Topic: Set

Basic concepts

The father of the theory of sets can be considered Bernard Bolzano. In his book Paradoxy indefinitely in the mid-19th century was the first mathematician and philosopher devoted endless characteristics of objevte. The concept of the set, however, introduced around 1870 Georg Cantor, who during the second half of the 19th century laid the foundations of set theory as a separate mathematical discipline

Find the answers:

The city is linked by name B. Bolzano, what was his profession, his parents came from?
Georg Cantor - what was the nationality, where he worked.

Set is a collection of objects that are clearly defined and identified, these objects are called elements of the set.



INVESTICE DO ROZVOJE VZDĚLÁVÁNÍ

Element x is an element in the set A	
Element x is not element of the set A	

Set according to the number of elements

Empty set	
The set of final	
The set of infinite	

Note:

The order in which the elements of a set are listed in an extensional definition is irrelevant, as are any repetitions in the list. For example $\{6, 11\} = \{11, 6\}$

Assignment of set:

	list of elements	characteristics of the set
Příklady zápisu	$M = \{a, b, c, d\}$	The set A of all students of 2.A The set of all prime numbers.



Basic operations

definice	
<p>Nechť A, B jsou libovolné množiny, nechť $B \subset A$. Doplněk množiny B v množině A je množina všech prvků množiny A, které neleží v množině B</p> <p>Označení B_A' absolute complement or simply complement of A, and is denoted by A'.</p>	
<p>Průnik množin A a B je množina všech prvků, které patří do množiny A a zároveň do množiny B. The intersection of A and B is the set of all things which are members of both A and B. Značí se $A \cap B$</p>	
<p>Poznámka: for each set A : $A \cap \emptyset = \emptyset = \emptyset \cap A$ Množiny A, B, pro něž platí $A \cap B = \emptyset$ se nazývají disjunktní disjunct</p>	
<p>Sjednocení množin A a B je množina všech prvků, které patří alespoň do jedné z množin A, B.</p> <p>The union of A and B, denoted $A \cup B$ is the set of all things which are members of either A or B.</p>	
<p>Poznámka: Pro každou množinu A platí: $A \cup \emptyset = A = \emptyset \cup A$</p>	
<p>Rozdíl množin A a B je množina, které patří množině A, ale nepatří množině B. The relative complement of A in B (also called the <i>set theoretic difference</i> of B and A), denoted by $B \setminus A$, (or $B - A$) is the set of all elements which are members of B, but not members of A.</p>	

