NOVATEUR PUBLICATIONS
JournalNX- A Multidisciplinary Peer Reviewed Journal
ISSN No: 2581 - 4230
VOLUME 10, ISSUE 6, June - 2024

COLLECTIONS AND RELATED ACTIONS IN TEACHING MATHEMATICS

Abdimumin Abdiraxmanov
QarDU Algebra va geometriya kafedriyasi dotsenti, pedagogika fanlari nomzodi.
abdirahmonov.abdimumin@mail.ru,

Muhabbat Esanturdiyeva
Matematika va kompyuter ilmlari fakulteti talabasi

Abstract
The concept of the collection is one of the main concepts of the mathematical technique of this tariff will be given to the concept of the theory of bundles at the same time a comprehensive fandir. Then continue in higher education school mathematics concepts in the course about the package initially. Stopped to detail in this article on the packages and their activities. Packages on their actions, some are entered in the properties of the package.

Keywords: Package, is part of the package, part of the iconic collection, the empty set, head set, merge across, difference, complementary package, universal collection, superimposed ayirma.

Introduction

Almost all the concepts of the theory of bundlessteep the application of science on the basis of lies. The collection that lies in the foundation of mathematics, he described to be one of the primary concepts are you will receive. When it is said is understood to be complex objects that have in common a feature on any package. For example, students can I set the cut-in point set, natural bundles, the number of employees of the firm package in the directory of the product produced collection etc. Mathematical packages $A, B, C, D, \ldots$ are marked with letters like home. $A, B, C, D, \ldots$ access to the collection are called elements and their generally small objects, respectively, $a, b, c, d, \ldots$ is determined by like letters. This, " a a collection of the elements belongs to (not appropriate)" check that $a \in A$ $(a \notin A)$ writing is like.

Also any elements is called the empty set and the set $\varnothing$ is defined as. For example, {with$x$ = 2 solutions of the equation}$=\varnothing$, {kvadratga is the perimeter of a is 0}$=\varnothing$, {kvadrati negative real numbers }$=\varnothing$ How does it do the task number 0 in algebra, in theory packages $\varnothing$ package performs a similar function. Each respective package for you of a different element B belongs to a package, $(a \in A \Rightarrow a \in B)$, then A the package B is called the part of the package and $A \subset B$ (or $B \supset A$) is determined.

For example, at the enterprise manufactured with high-grade collection of products A, all products, while the collection B that beneficially , it $A \subset B$ is.

From the definition optional A for the package $A \subset A$ and $\varnothing \subset A$ come be reasonable approval. Therefore, the package for $\subset$ the number of signs for ≤ similar to character has a meaning.

If a and b packages for $A \subset B$ v and$\subset$conditions is carried out at a time, this is called the equal of a package and a=V as written.

For example, $A=\{-1;1\}$ and $B=\{x^2-1=0$ the roots of the equation}, $C=$ {works of art used to write letters} and D={letters in alfavit} for the package $A=B,\ C=D$ of.

Actions on bundles and their properties. In algebra a and b number of breeding activities is included in the add on and if they

$a+b=b+a$ and $ab=ba$ (let kommutativ, that is, the replacement of the place),

$a+(b+c)=(a+b)+c\ va\ a(bc)=(ab)c$ (let assotsiativ, that is guruhlash),

$a(b+c)=ab\ +ac$ (i.e. the distribution distributiv)

shall be subject to the law. Apart from these, any a number $a+0=a$ and $a\cdot 0=0$ equally as well as is also appropriate. Now updated and expanded actions will put on the package.

A and B the association of the package (sum) so that C I in the package it, A and B is composed of elements that belong to at least one of the package $A\cup B$ is determined.

For example, $A=\{1,2,3,4,5\}$ and $B=\{2,4,6,8\}$ is $A\cup B=\{1,2,3,4,5,6,8\}$, $C=$ {I-grade products} and d={ii-grade products}, then $C\cup D=$ {I or ii-grade products} package represents.

Packages combining the practice of adding the number to the practice of, as

$A\cup B\ =B\cup A$ (let kommutativ), $(A\cup B)\cup C=A\cup(B\cup C)$ (assotsiativ let) is subject to the law of. Besides $A\cup\varnothing=A$, from the number and, unlike $A\cup A=A, B\subset A$ a∪b=a is also appropriate as well as equal. All this equality is proved using the definition of confirmation of your package. As an example, we will prove the last equality:

$x\in A\cup B\Rightarrow x\in A$ or $x\in B\Rightarrow x\in A\Rightarrow(A\cup B)\subset A;$

$x\in A\Rightarrow x\in A\cup B\Rightarrow A\subset(A\cup B)$

Therefore, $(A\cup B)\subset A,\quad A\subset(A\cup B)$ and according to the definition $A\cup B=A.$

Multiple $A_1,\ A_2,\ A_3,\ \dots,\ A_n$ packages of the sum $A_1\cup A_2\cup A_3\cup\ldots\cup A_n=\bigcup_{k=1}^{n}A_k$ is determined as the set of elements that belong to at least one of them is determined.

A and B across the package (in multiples) so that C I in the package, the package consisting of elements a and b, both of which are relevant to it and also $A\cap B$ is determined.

For example, $A=\{1,2,3,4,5\}$ and $B=\{2,4,6,8\}$ is $A\cap B=\{2,4\}$, $C=$ {Verified products} and d={quality products}, then $C\cap D=$ {Check quality products that found in} represents a collection.

The law of practice across packages is subject to the following:

$A\cap B\ =B\cap A$ (let kommutativ), $(A\cap B)\cap C=A\cap(B\cap C)$ (assotsiativ let),

$A\cap(B\cup C)=(A\cap B)\cup(A\cap C),\ A\cup(B\cap C)=(A\cup B)\cap(A\cup C)$ (let distributiv)

At the same time $A\cap A=A,\ A\cap\varnothing=\varnothing$ and $B\subset A$ if $A\cap B=B$ equal as well, is also appropriate. This is appropriate in the method shown above, you can make sure that your approval.

NOVATEUR PUBLICATIONS
JournalNX- A Multidisciplinary Peer Reviewed Journal
ISSN No: 2581 - 4230
VOLUME 10, ISSUE 6, June - 2024

Multiple $A_1, A_2, A_3, \ldots, A_n$ packages of across $A_1 \cap A_2 \cap \ldots \cap A_n = \bigcap_{k=1}^{n} A_k$ and is determined as all $A_k \ (k=1,2,\ldots,n)$ the relevant packages are available, as determined from the elements of the general collection.

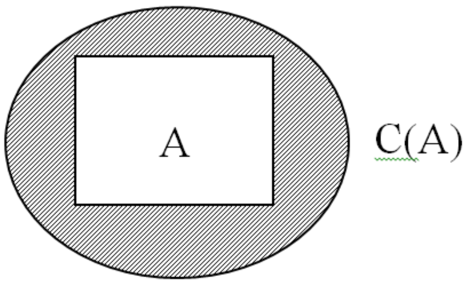
A and B ayirma package that A belongs to a package, but the B package and the package consists of elements which do not belong to them it is said $A \setminus B$, shall be defined as.

For example, if $A=\{1,2,3,4,5\}$ and $B=\{1,3,7,9\}$, then $A \setminus B=\{2,4,5\}$, $B \setminus A=\{7,9\}$; C={products produced in enterprises}and $D=${quality products} if $C \setminus D=$ {directory produced poor quality products}.

Therefore, $A \setminus B$ the package, A the package B is formed from elements which do not belong to a package. For ayirma package $A \setminus A=\varnothing$, $A \setminus \varnothing = A$, $\varnothing \setminus A=\varnothing$, and $A \subset B$ if $A \setminus B=\varnothing$ the proper relationship.

All packages any package as part of the package you people if you can look ω, then Ω the set is called universal. For example, for all packages associated with the number of $\Omega=(-\infty,\infty)$, man consists of the collection of $\Omega=${all people} is the universal set.

You A package the Ω universal part of the package, then the $\Omega \setminus A$ package A and the package is called the complement C(A) is determined. In the following graph you Ω in the framework of the universal package, A the package consists of the point located within the net of rectangular him if its complement of C(a) 1- crossed out from the area will be consisting of in the picture:

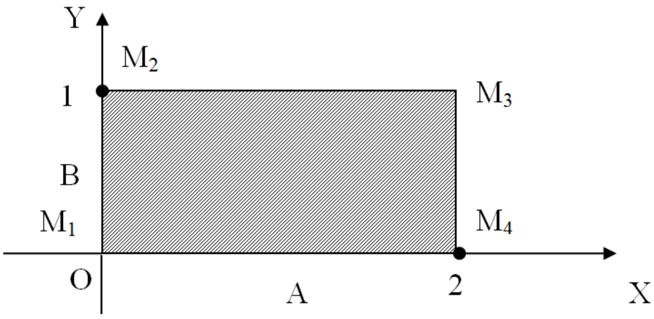


1-picture

Therefore, c(A) the collection A consists of an element into the collection, that is, $x \in A \Rightarrow x \notin C(A)$, $x \notin A \Rightarrow x \in C(A)$. for example, $\Omega=${all enterprises}, A={Plan fulfilled enterprises}, then c(A)={ he did not do businesses Plan} is set $\Omega=\{1,2,3, \ldots,n, \ldots\}-$ of bundles natural number, $A=\{2,4,6, \ldots, 2n,\ldots\}-$ the number of pairs pack $B=\{5,6,7, \ldots ,n, \ldots\}-$ 4 from the number of big natural bundles, then $C(A)=\{1,3,5, \ldots, 2n-1,\ldots\}-$ an odd number $C(B)=\{1,2,3,4\}-5$ represents the number of small bundles natural.

A and B as multiples of dekart packages $A \times B$, as determined and (x,y) $(x \in A,\ y \in B)$ configured the new package from the pair is said to wholesale blind.

For example, $A=[0,2]$ and $B=[0,1]$ the $A\times B$ package is in the plane of the (x,y) $(x\in A=[0,2], y\in B=[0,1])$ point, that is, the ends $M_1(0,0)$, $M_2(0,1)$, $M_3(2,1)$ and $M_4(2,0)$ the points located on from a rectangle will consist of (2-see picture below):



2-picture

If C={experienced workers} and D={young workers} then, if $C\times D$ it is different from working with experienced and young, "teacher-student" represents a pair consisting of a collection. In general, multiples of dekart for packages $A\times B\neq B\times A$, that are not available to fulfill the law kommutativ. For example, $A=[0,2]$ b=[0,1] package for $A\times B$ the basis of length 2, 1 which is the height of the right frame, $B\times A$ while based on the length of 1, which is on it represents a frame height 2 $A\times B\times B\times A$ in.

References

1. S. Alixonov. Methods of teaching mathematics. Named Cho'lpon publishing-printing creative house. Tashkent-2011.
2. Kolyagin Yu.M. I dr. Prepodavaniya v sredney shkole mathematical methods. Obtshaya methods. M. Prosvetshenie, 1976.
3. Kolyagin Yu.M. I dr. Prepodavaniya v sredney shkole mathematical methods. Chastnie methods. M. Prosvetshenie, 1977.
4. Rumors May Be G.I. I dr. Prepodovaniya methods in mathematics. Kiev.: 1977
5. To'laganov T., A Normatov. From mathematics praktikum. –T.:1989
6. Fundamental of mathematical physics guide from Muhammedov K. –T.: 1996
7. When beginning postupayu mathematical sbornik po zada president oftsh, where vtuzi ix. Pod redaktsiey M.I.Skanavi.Tashkent, The "Teacher" In 1992.
8. N.M.Roganovskiy, E.N.Roganovkaya. Methods preaodavaniya v sredney shkole mathematical. V dvux chastyax. Mogilev-2010.
9. Djurayev t. j., Sadullayev A. and others. Higher mathematics basics. 1-2 parts. T.:1995,1998.