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HISTORY OF MATHEMATICS

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***Annotation**: This article discusses the history of the development of mathematics. It provides information about the scientists who contributed to the development of this science.*

***Keywords**: mathematics, al-Khwarizmi, arithmetic, method, science, education, hypothesis, hypothesis, facts.*

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***Аннотация**: В данной статье рассматривается история развития математики. В нем представлены сведения об ученых, внесших вклад в развитие этой науки.*

***Ключевые слова**: математика, аль-Хорезми, арифметика, метод, наука, образование, гипотеза, гипотеза, факты.*

MATEMATIKA TARIXI

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***Annotatsiya:** Ushbu maqolada matematika fanining rivojlanish tarixi haqida so'z yuritiladi. Bu fanning rivojlanishiga hissa qo'shgan olimlar haqida ma'lumot beriladi.*

***Kalit so'zlar:** matematika, al-Xorazmiy, hisob ilmi, metod, fan-ta'lim, gipoteza, faraz, faktlar.*

Mathematics is clear logical observations based on knowledge about. Mathematics development basic, other science development like humanity-activities practical needs come turns out. The development of science this functional release formation with based on . Mathematics very much ancient from the fans one become first in stages reciprocal treatment and labor studies based on formed began. It is gradual evolve started , that is facts collect began . Mathematics as an independent science to the body when starting his henceforth next development mathematician knowledge he himself began to be affected

Mathematics content as follows:

1) his development in the process collected - facts ;

2) facts based on scientific of the imagination formation - hypothesis .

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3) facts and experiments results generalize and them theory and laws appearance quote ;

4) theory and laws study, mathematics learn characterizing general links representative methodology create. These elements always reciprocal in connection with and is developing. This connection and development learn us how historical period take to go understanding, realization to come reasons that's what identification is mathematics history subjects represents . Therefore for mathematics history - of mathematics development laws learner.

Above to the said basically mathematics history following issues do need. First - mathematics as a science development real content illumination. In these of mathematics methods, concepts and thoughts how appear that is, some mathematician theories historically how to the world arrival illumination. In nations known historical periods math development character and properties detection all contemporary great scientists added contributions lighting to do The second is mathematics history math various -district connections; including; math of people practical needs and studies with connection , other fans development with connection opening up of society social and economic structure and class struggles effect opening of nations scientist of the individual , scientists of the collective without opening consists of . Third is mathematics history learn current time mathematics logical content, development dialectics and the future right to understand help give need. Mathematics very much ancient from the fans one become first in stages reciprocal treatment and labor studies based on formed began . It is gradual evolve started , that is facts collect began . Mathematics as an independent science to the body when starting his henceforth next development mathematician knowledge he himself began to be affected

Mathematics history of mathematics development in the process long - many bright evidence with a in a row dark darkness cycles from the beginning forgiving evidence gives. In fact , the clergy are committed to the doctrine of religion any that do not come of innovation no to do or suffocate aspirants . Only some of scientists big courage before shift for opportunities creating gave.

Mathematics different sections of the realworld spatial uniforms and quantitative relationship in the study his methods different fog with separated. uniqueness and generality with integral combining costs.

These elements always reciprocal in connection with and is developing. This connection option and development learn us how historical period take to go understanding, realization to come reasons determination that 's it mathematics history subjects represents. Muslim Eastern Scholars also developed geometry (Thabit ibn Qurra , Abulwafo , Umar

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Khayyam), trigonometry as a science basis (Ibn al- Haytham , Beruni , Tusi), in particular , Ahmad al - Farghani by Ptolemy stereographic projection about theorem prove Baghdad at the academy geometry deep studied showed . In Arabic creation did mathematicians third and the fourth degree equations geometric method solve ways later analytical geometry to be created motivation was _

Mathematics in development Khorezm Ma'mun academy (Ibn Iraq , Beruni) is also important role played . East Mathematics development peak while Samarkand is scientific school period right is coming . Ulugbek and his led by scientists (Qozizoda Rumi , Giyosiddin Kashi , Ali Kushchi , Miram Chalabi , Hussein Birjani and others) huge observatory build , stars coordinates and planets movement big precision observation works with together observation results on lamps spherical coordinates calculation methods , interpolation formulas , later Gorner called the scheme method and in series approaches method functional they come out . Ulugbek 's " Ziji jadidi From the work " Koragoniy " very precision trigonometric functions tables are also included received. Sixteenth century In the East, science is facing a crisis caught . The Islamic world scientists works from the X-XII centuries To Europe spread. can be done started and Mathematics from the sixteenth century jadal development on the way entry for ground prepared. In particular, al-Khwarizmi , al- Fargani works Spain and Italy through , Ulugbek 's " Ziji jadidi Koragoniy through Istanbul. To Europe enter went. These works under the influence of In Italy Mathematics interest increases (L. Fibonacci , L. Pacholi , N. Tartalya). Arithmetic actions from the row degree , root and logarithm place takes over . Third and fourth degree equations roots real although negative _ sondan square root only through solve possibility complex to numbers need gives birth.

Seventeenth century Mathematics history J. Vallis, I. Kepler, R. Descartes , B. Cavalieri , P. Farm, F. Viet and other Pascal names with depends on new period begins . Mathematician definitions wide current are given . This is its own in turn , Mathematics development positive effect analytical geometry , projective geometry , probabilities theory and numbers theory basis puts . One by one started in universities Mathematics basic subject turns .

I. Newton differential and integral calculus to the idea other on the other hand - mechanics issues through approached . Here is the situation geometry similar to was : flat actions studied by G. Galileo for elementary geometry did is more complicated actions more complicated lines requires verification was . I. Newton in 1669 this in the subject research aggregated " Fluxes method " I. Barrow and J. Collins provided but it was published in 1736 reported .

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Mathematics in the 18th century development is mainly differential and integral calculus development and application reach with depends on was. Bernoulli family , Eyler, D'alamber , Lagranj , Lejandr and Laplace such as many famous scientists new industry comprehensively developing mathematics analysis name with strong research to the weapon turned . His based on differential equations , variation account and differential geometry such as independent areas to the body came.

In this period Academies of Paris , Berlin, St. Petersburg and Cambridge unti to major science centers turned , first scientific jur.lar edition ethyl the beginning Mathematics development accelerated . Projective geometry , probabilities theory , linear algebra and numbers theory development found , complex numbers wide using complex variable functions to study began .

Mathematics in the 19th century development mainly in 2 directions : both lengthwise and root side growing to be continued did . In this period Mathematics now universities lower courses program formed that fields : mathematics analysis , analytic geometry and linear algebra, differential equations , real and complex variable functions theories basically formed it has been and they are based on absolutely new ideas kun order output began .

Gauss l degree many complex numbers in the field p linear to the multiplier separation proved. A few 5 levels during equation solve matter mathematicians annoying so from was. P. Ruffini and N. Abel this equation the root his coefficients through four arithmetic and root remove through expression possible that is not based . E. Galua esa Lagranj , Lejandr ideas to be continued algebraic this is the equation in a sense insoluble matter of the roots symmetrical functions of the equation coefficients through to be expressed depends on to be showed . Here Galua first times of symmetry measurement function perform group concept used . From this close to that before idea based on the Gaussian compass and ruler using regularly polygon make the problem did was . Galua ideas yield was fields theory such make issue general without gave the opportunity to do .

Gauss and Galua ideas under the influence of first independent advanced areas to each other intervention started : complex variable functions differential equations and numbers theory , algebra - numbers theory and to crystallography application was found . Especially Klein everyone exchanges to the group separately geometry arrival based on the name "Erlangen program" in the history of science with entered from the report then mathematician conventions under lying fundamental principles began .

beginning of the 10th century Koshi differential and integral account limit and continuous concept based on statement reported this situation much clarity entered. But of continuous function integrated in proving its existence this concepts deficiency did . Kemtikfill in on the way attempts K. Weierstrass " What is a real number?" - he said to the question take came. In the meantime Euclidning famous fifth postulate prove for annual

ineffective attempts geometry invention to be done with completed. This is it geometry the basics deep inspection began to demand to do .

end of the 19th century come mathematics the basics strengthen on big steps put: real numbers theory completed (Veyershtrass , Dedekind), mathematician logic formed (Peano, Frege), functions theory created (Riman, Lebeg , Fubini , Stiltyes), of geometry axioms system to perfection delivered (Hilbert), collection of the concept importance understood , this understanding based on geometry such as all mathematics is also strict axioms on the basis of to build confidence appear was.

Late 19th century - early 20th century Mathematics in history for example not seen rise years was. In 1893 in Chicago, the Americas 400th anniversary of its opening attitude with wide international scale M. Congress was held. In Congress world mathematicians regularly most of the meeting new results about reports so stand confession was found . First official international M. congresses in 1897 in Zurich and in Paris in 1900 was held . Zurich congress A. Pointing ideas leading subject formed reached Paris congress and D. Hilbert himself popular 23 problem statement did . Puankare ideas and the Hilbert concept M. during the 20th century development very much productive effect showed.

middle of the 20th century Mathematics two in the direction of evolve went : a on the other hand , scientific and technical development need with differential equations , mathematical physics , limited Mathematics , probabilities theory , calculation Mathematics classic areas expanded-bbranching gone , second on the other hand , M.'s ichkm development laws come came out issues first in place standing , applied scope very arrow abstract areas (general algebra, differential and algebraic geometry , topology , functional analysis such as) areas diversity directions to the body brought . Advanced countries formed large scientific schools are narrow areas on directions divided into began . Until the 20th century Math of scientists training object is from is the last face in collective activity nature began to earn . Scientific journals , pamphlets , scientific collections , articles geometric progression on grows began . This is its own in turn, in the development of M. more a The problem is different directions in the middle contacts decline , statement style getting heavier departure , proof accuracy check to see and results accuracy to the wrong confidence yield to do complicated , topics very crushed to go take came. An integral " mathematical " profession such as "algebraist", "geometry" , " topologist ", " probability " and " functionalist " dozens specialties , each of them to each other almost incomprehensible hundreds of narrow outlets experts began to split . This phenomenon is described in M. Klein 's " Math new crisis. "

Since the 1950s republic other areas also scientific schools to the body came T.A. Sarimsokov functional analysis in the field , I.S. Arjanix , M.S. Salohiddinov and TJ Jo‘rayev - mathematician physics equations theory , I.S .Kukles - simple differential equations theory , T.N. Qori- Niyaziy , SH. Sirojiddinov , G.P. Matviyevskaya -

mathematics history , V.Q. Kobulov , F.B. Abutaliyev , N.A.Bondarenko, T. Buriyev , A.F. Lavrik calculation M.si and numbers theory directions basis they left . The end of the 20th century optimal management in the quarter theory (N. Yu. Sotimov), invariants theory (J. Hojiyev), mathematician of physics functional methods, operator algebras and quantum of physics mathematician methods (Sh. A. Ayupov) complex variable functions theory (A.S. Sadullayev) modern fields research on the road Scientific centers of Uzbek mathematicians in Moscow , St. Petersburg , Novosibirsk , Kiev , Yekaterinburg with traditional contacts except new capacity has were formed . United Kingdom , France , USA scientific centers Uzbek mathematicians works regularly published _ began .

1999. Uzbekistan mathematicians society formed Since 1991, " Uzbek mathematics magazine - Uzbek mathematical magazine ", students since 2001 for " Mathematics , Physics and informatics " magazine edition ethyl began . Today (2001) there are more than 70 doctors of sciences, more than 300 candidates of sciences in the republic activity shows.

Mathematics from history the former periods go based on That is first abstract mathematician understanding this is the natural end . Mathematics wide in scale development find antique In Greece in geometry big achievements with determined . Mathematics appear different in existence trade, land distribution , construction and time measurement such as practical issues to solve big importance profession reached.

Mathematics in development middle centuries of the world separately own has a place. He is Greek from mathematics difference did case, relative more practical character has was. Mathematics basically trade , profession , construction , geography , astronomy and astrology , mechanics , optics and. directions wide used .Islamic world cultural center Baghdad to the Bayt al- Hikma different scientist and printers gathered .

His algebra Poem linear and square equations structural solution about first is a book . For this reason , he is Diofant such as "the science of algebra father " merit was. His Indian numbers about Arithmetic of the work Latin translation in the 12th century West to the world decimal numbers system about understanding take entered. Al-Khwarizmi Geography seeing out and updated and as well as his astronomy it self and to astrology a how much works created.

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