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*ПОВЫШЕНИЕ КАЧЕСТВА И ЭФФЕКТИВНОСТИ ВЫСШЕГО ОБРАЗОВАНИЯ ЗА СЧЕТ ВНЕДРЕНИЯ МЕЖДУНАРОДНЫХ СТАНДАРТОВ КАЧЕСТВЕННОГО ОБУЧЕНИЯ И ОБРАЗОВАНИЯ*

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*IMPROVING THE QUALITY AND EFFECTIVENESS OF HIGHER EDUCATION INSTITUTIONS THROUGH THE ADOPTION OF INTERNATIONAL STANDARDS OF QUALITY TEACHING AND LEARNING*

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Аннотация. В статье приводятся некоторые применения математической теории в экономике. В частности, когда необходимо получить максимальную прибыль от суммы к концу года или через несколько лет.

Abstract*.* The paper provides some applications of mathematical theory in economics. In particular, when it is necessary to get the maximum profit from the amount by the end of the year, or after several years.

Ключевые слова: объем капитала, большая эффективность, непрерывные проценты.

Keywords:the amount of capital, greater efficiency, continuous interest.

It is well known, that President of Uzbekistan signed a Decree “On Action Strategy on further developing of Uzbekistan”. The Action Strategy on five priority directions on development of Uzbekistan is designed for 2017-2021 [1].

The document is aimed at improving the efficiency of the reforms, creating conditions for full and accelerated development of the state and society, implementing the priority areas for modernization and liberalization of the country in all spheres of the life.

The Strategy includes five priority directions – improving state and public construction, ensuring rule of law and reforming judicial-legal system, developing and liberalizing economy, developing social sphere and ensuring security, inter-ethnic harmony and religious tolerance, implementing balanced, mutually beneficial and constructive foreign policy.

The Action Strategy proclaims improving the quality and effectiveness of higher education institutions through the adoption of international standards of quality teaching, learning and assessment.

According to this Decree nowadays the requirement of modern life is to teach our subjects implementing foreign experience in education. That is why we teach our subjects in English.

At present, the ability to apply theoretical knowledge in practical tasks becomes the decisive factor for studying discipline. In particular, based on years of experience teaching practical mathematics in the economic university, the authors seem to need to demonstrate the solution of some economic problems with the help of a mathematical apparatus.

If we fail to improve math education, given the needs of the modern world and students, we are in danger of turning mathematics into an increasingly "dead language" and alienating groups of students whose mathematical potential will remain undeveloped [2].

Let the deposit at the beginning of the year equals to . Interesting task is to get the maximum profit from this amount by the end of the year. One of the existing ways is to use the services of a bank. Suppose the bank issues 100% per annum. This means a 100% annual increase in capital, and proportionately in the remaining short periods (e.g. on % per month) [3].

This means that the amount of capital will double in a year . For even greater efficiency in six months you can close the account and immediately open it for the next six months, in this case the size of the capital in six months , and at the end of the year . How often an account is closed and opened for a year, so much more profit can be obtained. For example, if you do this at the end of each month, at the end of the year, the amount of capital , if the account is to be closed - opened every day, the amount of savings at the end of the year is .

If the closing - the opening operation is made continuously (of course, theoretically), then at the end of the year the accumulations are equal to

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So, at a nominal 100% rate, the deposit may be 171 % .

The same reasoning can be repeated at the nominal bank rate . Then the possible size of (theoretical) savings will be equal to



In the more general case, let the capital  is invested in the bank by the rate not for a year, but for t years. Dividing the time interval  on  parts and tending to infinity, we'll get a possible theoretical amount:



- is called continuous interest formula.

For example, at an annual rate  at the end of the second year  , i.e. the initial contribution is growing more than seven times.

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