APPLICATIONS OF FUNCTIONS IN ECONOMIC PROBLEMS

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Abstract: Article to students function understanding give, practical and economic to issues applications about.

Key words: Function; linear function; quadratic function; rational function; economic in the matter function.

Economical of sciences from the features come out and them in learning central place issue, exercise solve occupies Reason:

1) matter, verb to solve perfect know, got knowledge in practice use enable will give;

2) matter, verb solve through of students knowledge in getting activity increases;

3) matter exercise to thinking teaches.

Problem, exercises students knowledge even in the test comfortable method. Problem, from exercises science to teach for in the preparation of handouts wide use possible. Of them in class use different interactive methods support lesson to pass organize in reaching use opportunity extremely.

That's why for too to the matter only the assignment account book based on performance, answer determination maybe not thought conduct object as focus for nothing it's not.

Using the problem science when learning sure numbers, evidence, evidence based on analysis to do opportunity wide. From him except modeler game, small to groups to be, competition transfer and another methods based on lesson It is also a problem in passing, from exercises wide use opportunity big.

Economical in the sciences meshes of students in observation do, conclusion to issue teach with together less time to spend, some in matters hesitating standing of students right answer to find teaches.

The problem is the meshes complexity in terms of stratified without formed by the students potential according to is given As a result complicated issue unable to solve disappointed cooling students are also being taught to the topic attention focus can.

of the function definition given, it is known one examples from being removed after elementary of functions sure applications about to stop need. Below we have the functions economic issues attention let's look Initially simple from examples let's start.

Example 1. Researcher known one consumption in the market to tea has been demand wants to learn. How much   amount tea work release for it follows function compiled by:

$$Q_t = f(P_t; Y; A; N; P_c)$$

this on the ground Q_t − Demand to be done tea quantity, P_t −price of tea, Y − of consumers average whose income is spent on A −advertising tea cost, N −number of consumers, P_c −price of coffee (as an alternative drink).

That's it in place from students of the function arguments about one little thought conduct to ask need. Maybe some argument is redundant, maybe again another arguments to add it is necessary. f of the function appearance about what are to say can, more precisely, this function linear has been to the situation sure example to bring is it possible.

 Function to compose about assignments are also different to the topic according to to give to the goal according to For example.

Next in the example special economic the concept to know Demand to be done the situation let's see.

Example 2. Demand function $P = 60 − 0.2Q$ for product the price is 25 sh.b. has been in case of demand elasticity find the point.

In this of demand elasticity the point to find formula to know need will be If required function given if TEN (of demand elasticity point) as follows found:

$$e = (-1)\frac{P}{Q}\left(\frac{1}{burchak\ koefitsiyent}\right).$$

So this is it in the example corner coefficient Q in front of coefficient equal to will be From us $P = 25$ b is dead case being asked for , first suitable Q we can find, i.e

$$Q = \frac{(60 - 25)}{0.2} = 175.$$

Then while TEN is as follows found:

$$e = (-1)\frac{25}{175}\left(\frac{1}{-0.2}\right) = \frac{5}{7}.$$

Next in the example linear didn't happen of functions to the application about examples we bring.

Example 3. Firm building rent for 10,000 sh.b per year. spends of the firm average value find the function.

 First of all average value function how to find formula to give need will be:

$$AFC = \frac{10000}{Q} = 10000Q^{-1}$$

formula with is found. This is a function while linear it's not. Give an example during work released product quantity sure if brought average value function is also clear the amount to find possible will be.

Next in the example immutable and variable expenses from concepts using square function, in general, is complex function come coming out economic from issues example we bring.

Example 4. If any of the enterprise average immutable cost function $= 200x - 1$, average variable cost and $AVC = 0.2x^2$ the function if (this On the ground $x -$ product quantity), find the average total cost function of the enterprise.

Average common cost function average immutable and variable of expenses from the total consists of: _

$$ATC = AFC + AVC = 200x - 1 + 0.2x^2$$

or

$$ATC = 0.2x^2 + 200x - 1.$$

Example 5. Someone to the product has been Demand function If $P = 80 - 0.2Q$b dies, the sum obtained from the production of goods i income find Q the function ta product work from release coming income count for product the amount his for the price increase need will be:

$$TR = PQ = (80 - 0.2Q)Q = 80Q - 0.2Q^2.$$

ЛИТЕРАТУРА

1. Abdujalilovna, D. T., Sayibjon, K., Shukirillayevna, K. G., & Durbekovich, K. M. (2023). Flow Around A Thin Profile With A Two-Phase Medium With Solid Particles. *Journal of Pharmaceutical Negative Results*, 3592-3596.

2. Djalilova T. A., Xalilov M. D.. Oliy matematikadan o'quv qo'llanma 1-qism. Toshkent – 2023.

3. Muradiljon, K., & Mashxuraxon, S. (2023). Application of the Theory of Linear Differential Equations to the Study of Some Oscillations. *Web of Synergy: International Interdisciplinary Research Journal*, 2(1), 60-65.

4. Durbek o'g'li, X. M., & Tulqinovna, S. M. (2023, January). Matritsalarning iqtisodiyotdagi tadbiqlari. In *" USA" INTERNATIONAL SCIENTIFIC AND*

PRACTICAL CONFERENCE TOPICAL ISSUES OF SCIENCE (Vol. 11, No. 1, pp. 15-19).

5. Turgunoy, D., Komolova, G., & Murodiljon, K. О распространении сферической волны в нелинейно-сжимаемой и упругопластической средах. *Innovative, educational, natural and social sciences*, *2*(3), 2181-1784.

6. Komolova, G., & Khalilov, M. Stages of drawing up a mathematical model of the economic issue. *Journal of Ethics and Diversity in International Communication jurnali, e-ISSN*, 2792-4017.

7. T. A. Djalilova, G. Sh. Komolova, M. D. Khalilov. On the distribution of the spherical wave V. innovative, educational, natural and Social Sciences. 87-92 page 16. 03. 2022 year.

8. Ergashev Sultonmurod, K. B. (2021/12). Differensial tenglamalarni mehanika va fizikaning ba`zi masalalarini yechishga tadbiqlari. *Наманган муҳандисликтехнология институти илмий-техника журнали*, 430-433.

9. Durbek o'g'li, X. M., & Komiljon o'g'li, K. B. (2022). Differensial tenglamaga olib keluvchi ba'zi masalalar. *Barqarorlik va yetakchi tadqiqotlar onlayn ilmiy jurnali*, 15-19.

10. Durbek o'g'li, X. M., & Tulqinovna, S. M. (2023/1/1). Oddiy differensial tenglamalarni mehanika va fizikaning bazi masalalarini yechishga tadbiqlari. *Новости образования: исследование в XXI веке* (стр. 763-773). Rossiya: Международный научный журнал .

11. Komiljonov Boburjon, X. M. (2021/4/9). O'quvchilarda funksiya tushunchasini shakllantirish. *Matematikani iqtisodiy-texnik masalalarga tadbiqlari va o`qitish muammolari*, (стр. 297-303). Узбекистан.

12. Tillayev Donyorbek, X. M. (2021/11/15). Fazoda urinma akslantirish va uning formalizmga bog'liqligi. *Uzacademia ILMIY-USLUBIY JURNALI*, 86-92.

13. Xalilov Murodiljon, K. B. (2021/4/9). Irratsional tenglama va tengsizliklarni yechish jarayonida o'quvchilarning ijodiy qobiliyatlarini rivojlantirish. *Matematikani iqtisodiy-texnik masalalarga tadbiqlari va o'qitish muammolari* (стр. 312-322). Toshkent: Respublika ilmiy-amaliy anjumani.

14. Sultanmurad, E. (2022). Vektorning hosilasi va uning tatbiqlari. *Машинасозлик илмий-техника журнали*, 241-246.

15. Ergashov S., Komiljonov B., Xalilov M. Differensial tenglamalarni mexanika va fizikaning ba'zi masalalarini yechishga tadbiqlari // Namangan muhandislik texnologiyalari instituti ilmiy-texnika jurnali 430-433 b.

16. Xalilov Murodiljon, Tillayev Donyorbek Experience in Using the relationship between mathematics and physics in shaping the concept of limit // Analytical journal of education and development 2021 yil, 212-215 b..

17. Xalilov M., Komolova G., Komiljonov B. Solve some chemical reactions using equations // European Journal of Business Startups and Open Society. Vol. 2 No. 1 (2022): EJBSOS ISSN: 2795-9228. 45-48 p.

18. M.D. Xalilov, B.K. Komiljonov, G.Sh. Komolova. Garmonik skalyar tebranishlarning kompleks va vektor ifodalanishi. Miasto Przyszłości. ISSN-L:2544- 980X. Table of Content - Volume 24 (Jun 2022).

19. Джалилова, Т. А., Комолова, Г. Ш. К., & Халилов, М. Д. У. (2022). О распространении сферической волны в нелинейно-сжимаемой и упругопластической средах. *Oriental renaissance: Innovative, educational, natural and social sciences*, *2*(3), 87-92..

20. Комолова, Г., & Халилов, М. Stages of drawing up a mathematical model of the economic issue. *Journal of ethics anddiversity in international communication. Испания-2022*, *60*, 45-48.

21. Durbek oʻgʻli, X. M., & Tulqinovna, S. M. (2023, January). Matritsalarning iqtisodiyotdagi tadbiqlari. In *" usa" international scientific and practical conference topical issues of science* (Vol. 11, No. 1, pp. 15-19).

22. Xalilov, M. D., Komiljonov, B. K., & Komolova, G. S. (2022). Complex and vector expression of harmonic scaliar vibrations. *Miasto Przyszłości*, *24*, 341-344.

23. Gulhayo, K. G. K., Murodil, X., & Bobur, K. Ba'zi kimyoviy reaksiyalarni tenglamalar yordamida yechish. *Evropa jurnali*, 45-48.

24. Komolova, G., Xalilov, M., & Komiljonov, B. Tenglamalar yordamida ba'zi kimyoviy reaksiyalarni yechish. *Yevropa biznes startaplari va ochiq jamiyat jurnali.-2022.-2-jild.-Yo'q*, *1*.

25. Djalilova, T., Komolova, G., & Xalilov, M. (2022). О распространении сферической волны в нелинейно-сжимаемой и упругопластической средах. *Oriental Renaissance: Innovative, educational, natural and social sciences jurnali*, 2181-1784.