МЕДИЦИНА, ПЕДАГОГИКА И ТЕХНОЛОГИЯ:
ТЕОРИЯ И ПРАКТИКА
Researchbib Impact factor: 11.79/2023
SJIF 2024 = 5.444
Том 2, Выпуск 9, 30 Сентябрь

Clearly and not clear of integrals economic in processes application

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Abstract. This in the article sure and not clear of integrals in the economy applications analysis will be done . Economical processes in modeling and in assessment from integrals how use possibility , especially the income optimization , costs management , consumer and work issuer surplus such as economic issues in solving application seeing will be released .

Key words : definite integral, indefinite integral, economic modeling , consumer surplus , production issuer surplus , capital accumulation , demand and offer

Enter

In economics mathematician methods apply not only theoretically , maybe practical is also important is considered Growth pace assessment , income and expenses analysis make , the optimal investment and work release strategies in choosing sure and not clear integrals main from tools is one . These are methods economic of processes time according to how change , demand and offer between relationship to understand for is used . Especially the macro and microeconomic analysis mathematician respectively in expression they are big importance occupation is enough

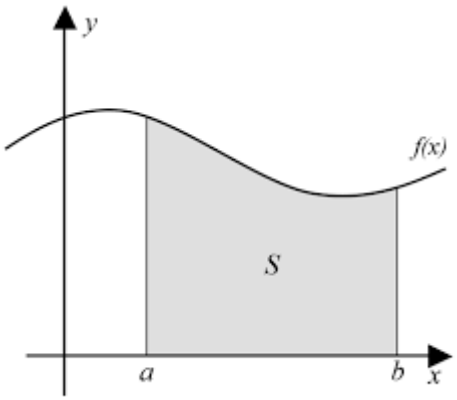
Clearly integrals known boundaries between economic of processes common size or value in the calculation is used . For example , general income , consumers and work of producers surpluses in determining is used .

Uncertain integrals while given economic of processes common expression to find help gives They are using of change how at pace happened to be and capital or another economic of indicators how get together to go to determine can Clearly and not clear integrals in economics many issues in solving use can , for example , capital accumulation , economical growth pace calculation , profit and expenses optimization such as . This this is the article issues mathematician analysis using seeing comes out and sure examples based on their in the economy role shows .

Precise integral function under the field count through meeting process represents Mathematics and economic in the models this field most of the time amounts , profits or expenses with depend

$$\int_a^b f(x)dx = F(b) - F(a),$$

this on the ground $f(x)$ function and $[a,b]$ between field is (Chart 1).



Drawing 1

Precise integral economic functions known one in between common size to count service does This method the following processes for applies to :

1. General income calculation : Income function to time tied up using the definite integral common income to determine For example , $R(t)$ income function known time between t_1 from t_2 to if , general income to find for the following definite integral is used :

$$Umumiy \quad daromad = \int_{t_1}^{t_2} R(t)dt.$$

An example for , enterprise by work issued of products income count for time in the interval $R(t) = 1000e^{0.05t}$ function given in between integration as a result common income $\int_0^{10} 1000e^{0.05t}dt$ is considered This while enterprise o ' shine analysis to do help gives

2. Iste ' molchi and work issuer surplus : Demand and offer curve lines between the field sure integral using count Consumer surplus to find for demand and price curve lines between the field to find need : Consumer surplus

$$Iste'molchi \quad profitsiti = \int_0^P \left(Q_d(P) - Q_s(P)\right)dP,$$

Here $Q_d(P)$ demand function , $Q_s(P)$ while offer is a function of .

For example , if the demand function $Q_d = 200 - 5P$, offer function while $Q_s = 50 + 3P$ if , using the definite integral consumer of the surplus common volume as follows is :

$$Iste'molchi \quad profitsiti = \int_0^P (200 - 5P)dP = \left[200P - 2.5P^2\right]\Big|_0^P = 200P - 2.5P^2$$

Indefinite integral economic variables in finding wide is used . The following practical manuals this shows :

1. Capital accumulation : Capital time according to to change expressive growth model in creating indefinite integral is used . If capital change pace equation through given if , $\frac{dK}{dt} = rK$, then this of Eq not clear integral the following in appearance will be :

$$K(t) = K_0 e^{rt}.$$

Through this formula of capital time according to how growth observation can Capital Accumulate in the model time according to growth pace was determined .

2. Demand and offer functions again recovery : If economic of the process derivatives given if , using the indefinite integral this of the function common appearance recovery can For example , the demand function grow pace $\frac{dQ_d}{dP} - 5P$ if , using the integral recovery can :

$$Q_d(P) = \int -5PdP = -2.5P^2 + C,$$

Here C is the demand function initial value determiner permanent

Conclusion .

Clearly and not clear integrals in economics important analysis of means one they are different economic processes in modeling efficient is used . Clearly integrals using common income , expenses and benefit such as indicators count can These are the indicators enterprises and economic of systems financial the situation sure analysis to do and manage for important Consumer and work issuer surpluses to determine while demand and offer functions based on economic processes deeper to understand help gives Uncertain integrals using economic of processes time according to to change analysis to do opportunity appear will be For example , capital tumor modeling of enterprises future financial situation prophecy in doing is used . This methods economic decisions acceptance making investments in planning and economic politics in formation important role plays This of integrals main advantages economic processes more precisely assessment , time pass with changes modeling and economic of systems efficiency to increase directed . In the future more complicated economic models analysis to do for of integrals application field expand and mathematician methods development necessary Integrals economic

processes deeper analysis to do and efficient manage for main from tools one as service does

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