

APPLICATION OF BUSINESS MATHEMATICAL FUNCTIONS AND MATHEMATICAL MODELS IN REAL-LIFE E-BUSINESS

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Abstract

Electronic Business (e-Business) means the utilization of Information and Communication Technologies (ICT) in support of all the activities of business. In the new era, the internet-based way of doing business has changed many industries and has influenced many customers and businesses. It has changed the shapes of whole set of industries and markets and has already had a great impact on consumers and is all set to have a very exciting future. It has improved services, reduced costs, opened new channels and transformed the competitive landscape. To run any e-Business, the connection between mathematics and business must be very strong since the latter cannot survive without the former's existence. In this paper, we are going to examine different kinds of business mathematical functions, mathematical models and their behavior and how these functions are used to represent the realistic situations in e-Business. Examples to illustrate the process of mathematical modeling using only basic mathematical ideas and concepts are presented. While going through this paper, it is hoped that mathematics learners will not only appreciate the beauty of the subject but also the usefulness and power of mathematics. Mathematical modeling offers excellent opportunities to connect and use ideas from different areas.

Keywords: e-Business, Mathematical Functions, Mathematical Modeling.

OBJECTIVES

The main objective of this paper is to study how to write a mathematical function according to the situation and prepare the business mathematical model according to mathematical function with the help of examples which are useful in e-Business.

INTRODUCTION

In today's world, e-Business is growing so rapidly that there is tough competition in the market between the increasing number of participants and is adding up to new innovations every day leading to short development cycles. Many companies are emerging with new business models to exploit the new opportunities. In spite of this, the business has rough times trying to keep up with the rapid development of e-Business. More and more efforts are made to grasp the essentials of e-Business and in particular mathematical e-business models. The main evolution of e-Business is based on business mathematical functions and mathematical models.

What is Business Mathematical Function?

It is a mathematical relationship in which the values of single dependent variables are determined by the values of one or more independent variables. Thus, a function relates an input to an output.