# كلية العلوم College of Sciences

جامعة الملك عبدالعزيز King Abdulaziz University



#### MainPage

- > About College
- Files
- Researches
- Courses
- > Favorite Links
- Our Contacts

Visits Of this Page:15

# Research Details :

# Research Title

### : <u>COMMENTS ON APPLYING GEOMETRIC PROGRAMMING FOR</u> <u>SOLVING CONSTRAINED MULTI-ITEM INVENTORY MODELS</u> ملاحظات حول استخدامات البر مجة الهندسيةفي حل نماذج المخزون متعددة السلع المقيدة

# Descriptipn

: Previous studies handled the stock system, using many mathematical methods including the geometric programming and Lagrange method. Through this study, we will handle systems of multi stored goods through these tow methods and also this study clears the misconceptions of researchers when applying geometric programming. Also this study will introduce a new constraint that have not been discussed by previous researches . The summary concludes that Lagrange method is the best while dealing with problems of systems of multi stored goods. This paper consists of seven chapters: The first section: Introduction This chapter handles the definition of general conception of stock as well as stock needs in our lives and its importance in practical life, important questions concerning (Marketing Plans) and after finding solutions, we will adopt a better system that achieve the least costs a long with satisfying the needs and requirements of marketing and production. The second section: Definitions and Terms Through this chapter I will review the most important definitions and terms of the paper and study of the regular model of providing a piece of goods. This chapter also tackles the most important items, which is the constraints of the cost of purchase in order to get a low price if the purchased quantity exceeded the definite limit. The third section: handling the Inventory models by using(Kohn-Tucker)Conditions. This chapter discusses the general view of the use Lagrange method and (Kohn-Tucker)Conditions to solve the problems of nonlinear programming. Forming inventory model with no registers as well as study of inventory model subject to the restriction on stock space and the inventory mode subject to the restriction on machine time .also, study of inventory model subject to the restriction on stock space and machine time restriction. The fourth section: Geometric programming This chapter discusses the theoretical conceptions of Geometric programming and using it handling the following problems: 1- Nonlinear programming. 2- Non-linear programming with one register. 3- Non-linear programming with two registers. The fifth section: a survey of previous researches concerning model of handling stock with one or two items by using Geometric programming. This chapter is a survey of the most important researches concerning model of handling stock with one or two items by using Geometric programming. The sixth section: clearing out the mistakes of the other researches when studying models of multi items and handling