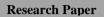
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Approximation of Surface Functions

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I. INTRODUCTION

Background:

A function F(x,y) maps a pair of values(x,y) to a single real number the three dimensional coordinate systems, it has been already used in a convenient way, to visualize such functions above each point(x,y) in the x,y plane, graphing the point(x,y,z) where of course z=F(x,y).

Abstract:a function of two independent variables can be approximated by a series to be solved for integration.

Methodology: representation of surface function by a series, to be integrated easier, it is qualitative and quantitative systematic method, by differentiation.

Literature of review: approximation of surface functions of two independent variables x,y,and follower z variable by a series.

Problem of study: to approximate difficult functions, by a purified function which is easy to solve.

Motivation: to be able to solve such difficult functions easier.usingx,y,and follower z as a solution. Conclusions:easy used surface function.

Results: surface function.

Appendix $F(x,y)=f(0,0)+\sum(df(0,0)/dx^ndy^i)(x^ny^i/n!^i!)$ $\sum(df(0,0)/dx^1)*x^1/!!)+(\sum df(0,0)/dy^m)*y^m/m!)+$ Where n and i from 0 to infinity and 1 and m from 0 to infinity

Proof

dF(0,0)/dxdy=df(0,0)/dxdydF(0,0)/dy^2=df(0,0)/dy^2 dF(0,0)/dxdy^2=df(0,0)/dxdy^2 $dF(0,0)/dx^2dy = df(0,0)/dx^2dy$ dF(0,0)/dx^2dy^2=df(0,0)/dx^2dy^2 taking in to account that the approximated function is f(x,y) and the original function is F(x,y). as an example suppose $F(x,y)=e^x$ $dF(x,y)/dx(x,y)=e^x siny$ $dF(x,y)/dx^2(x,y)=e^x siny$ dF(x,y)/dy=e^xcosy and so on suppose $x=\pi/4$ y=π/6 approximated value=1,094792746 exact value=1.0966400026



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