

St. Mira's College for Girls, Pune  
 (Autonomous-Affiliated to SavitribaiPhule Pune University)  
 Subject: Mathematics Paper II Numerical Analysis BS31604  
 SEMESTER: III  
 Year 2020-2021

1. Unit No.: I
2. Employability/Entrepreneurship/Skill development  
 Skill Development : Problem Solving, computing skills
3. Test on **Errors** on Google Classroom

The screenshot shows a Google Classroom interface with a submission titled "imgtopdf\_generated\_021201520043 (1).pdf". The submission content is as follows:

Name - Kishka Kawale  
 Roll no. 5505

Given  $u = x^3 + y^2$  at  $(3, 4)$   
 $\Delta x = 0.0005, \Delta y = 0.0005$

Solution:  
 $\Delta u = \left(\frac{\partial u}{\partial x}\right)\Delta x + \left(\frac{\partial u}{\partial y}\right)\Delta y$

$\frac{\partial u}{\partial x} = 3x^2, \frac{\partial u}{\partial y} = 2y$

Substituting the values in the formulae  
 $\Delta u = 3(3)^2(0.0005) + 2(4)(0.0005)$   
 $= 3(9)(0.0005) + 8(0.0005)$   
 $= 0.0135 + 0.004$   
 $\Delta u = 0.0375$

Answer:  $\Delta u = 0.0375$



*Gitanjali Phadnis*  
 Gitanjali Phadnis

*[Signature]*  
 Principal Incharge  
 St. Mira's College for Girls

St. Mira's College for Girls, Pune  
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Class:SYBSC Computer Science

Subject: Numerical Analysis

Subject Code:BS31604

Semester: III

Year: 2020-21

1. Unit No.: 1
2. Employability/Entrepreneurship/Skill development  
Skill Development : Problem Solving, computing skills
3. Test on Errors on Google Classroom

imgtopdf\_generated\_0211201520043 (1).pdf

Name - Kishu Kewale  
Roll no - 5555

Given  $u = x^3 + y^3$ ,  $x=3, y=4$   
 $\Delta x = 0.0005, \Delta y = 0.0005$

Solution:  
 $\Delta u = \left(\frac{\partial u}{\partial x}\right)\Delta x + \left(\frac{\partial u}{\partial y}\right)\Delta y$

$\frac{\partial u}{\partial x} = 3x^2, \frac{\partial u}{\partial y} = 3y^2$

Substituting the values in the formulae

$\Delta u = 3(3)^2(0.0005) + 3(4)^2(0.0005)$   
 $= 3(9)(0.0005) + 3(16)(0.0005)$   
 $= 27(0.0005) + 48(0.0005)$   
 $= 0.0135 + 0.024$   
 $\Delta u = 0.0375$

Abdo  $\Delta u = 0.0375$



*G.M. Phadnis*  
Gitanjali Phadnis  
Subject Teacher

*JR*  
Principal Incharge  
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