

**St. Mira's College for Girls, Pune**  
**(Autonomous-Affiliated to SavitribaiPhule Pune University)**  
**Class: SYBSC Computer Science**  
**Subject: Numerical Analysis**  
**Subject Code: BS31604**  
**Semester: III**  
**Year: 2019-20**

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

Name: Devyani Rupesja  
 Roll No: 5502  
 Date: 20/7/19

Supplement No. 2246  
 Roll No.:

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Q1) Evaluate using trapezoidal rule.

$$I = \int_{-2}^2 \frac{x}{5+2x} \quad \text{Take } h=0.5$$

Q2) State General Quadrature formula & hence derive Simpson's 1/3rd rule

Ans:  $a = -2, b = 2, h = 0.5$

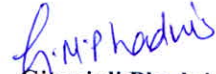
$$n = \frac{b-a}{h} = \frac{2-(-2)}{0.5} = 8$$

where n = no. of intervals

$x$	$y$
-2	-2
-1.5	-0.15
-1	-0.33
-0.5	-0.125
0	0
0.5	0.0833
1	0.1428
1.5	0.1875
2	0.2222



  
**Principal Incharge**  
**St. Mira's College for Girls**

  
**Gitanjali Phadnis**  
**Subject Teacher**