Scilab Practical 3 : Simpson's 1/3rd Method

Using suitable loop write a sci-lab program to obtain approximate value of integral using Simpson's 1/3rd rule (Correct up to five decimal places).

1) $\int_0^2 (1 + 2x^3)\, dx$ by dividing intervals into 10 subintervals.(Roll. No: 1-10)
2) $\int_0^1 e^{-2x}\, dx$ by dividing intervals into 8 subintervals. (Roll. No: 11-20)
3) $\int_7^{7.8} (4 + x^2)\, dx$ by dividing intervals into 8 subintervals. (Roll. No: 21-30)
4) $\int_{-3}^3 x^4\, dx$ by dividing intervals into 12 subintervals. (Roll. No: 31-40)
5) $\int_1^2 \frac{5}{x} dx$ by dividing intervals into 10 subintervals. (Roll. No: 41-50)
6) $\int_0^1 \frac{1}{1+5x} dx$ by dividing intervals into 8 subintervals. (Roll. No: 51-60)
7) $\int_{-1}^1 \frac{1}{1+3x^2} dx$ by dividing intervals into 12 subintervals. (Roll. No: 61 onwards)

Scilab Practical 4 : Simpson's 3/8th Method

Using suitable loop write a sci-lab program to obtain approximate value of integral using Simpson's 3/8th rule (Correct up to five decimal places).

1) $\int_{-1}^1 \frac{1}{1+3x^2} dx$ by dividing intervals into 12 subintervals.(Roll. No: 1-10)
2) $\int_0^1 \frac{1}{1+5x} dx$ by dividing intervals into 9 subintervals. (Roll. No: 11-20)
3) $\int_1^2 \frac{5}{x} dx$ by dividing intervals into 6 subintervals. (Roll. No: 21-30)
4) $\int_{-3}^3 x^4\, dx$ by dividing intervals into 9subintervals. (Roll. No: 31-40)
5) $\int_7^{7.8} (4 + x^2)\, dx$ by dividing intervals into 12 subintervals. (Roll. No: 41-50)

6) $\int_0^1 e^{-2x}\,dx$ by dividing intervals into 9 subintervals. (Roll. No: 51-60)

7) $\int_0^2 (1+2x^3)\,dx$ by dividing intervals into 9subintervals. (Roll. No: 61 onwards)

Specimen Outcome Printout

Name: _____ A.Y._____ Roll No. :_____ Division:_____

SCI-LAB PRACTICAL 1: SIMPSON'S 1/3RD METHOD

QUESTION:

INPUT

OUTPUT

x0=

xn=

n=

h=

x=

y=

Total coordinates of y=

Sum of extremes coordinates X=

Sum of Even coordinates E=

Sum of Odd coordinates O=

Solution by Simpson's 1/3rd rule I =

Specimen Outcome Printout

Name: _____ A.Y._____ Roll No. :_____ Division:_____

SCI-LAB PRACTICAL 2: SIMPSON'S 1/3RD METHOD

QUESTION:

INPUT

OUTPUT

x0=

xn=

n=

h=

x=

y=

Total coordinates of y=

Sum of extreme coordinates X=

Sum of Multiples of three coordinates T=

Sum of Remaining coordinates R=

Solution by Simpson's 3/8th Rule I=