Quiz Master

MTH603(LECT 31 TO 38)

Rizwan Qadeer

All mcqs are 100% correct and specially uploaded for 2020 final exams…for any type of help(specially related to CS619 project) you can contact me. I will quide you properly.

MTH603:Quiz#2 Quiz Start Time: 10:37 AM, 22 August 202(

Question # 1 of 10 (Start time: 10:37:49 AM, 22 August 2020) **Total Marks:**

Given that $\frac{dy}{dt} = t + \sqrt{y}$ with the initial condition $y_0 = 1$ at $t_0 = 0$ Using Modified Euler's method, for the range $0 \leqslant t \leqslant 0.6$, h = 0.1 is

Select the correct option

Reload Math Equations

- 1.0
- 1.2
- 2.1
- [x] 1.1

MTH603:Quiz#2 Quiz Start Time: 10:37 AM, 22 August 2020

Question # 2 of 10 (Start time: 10:38:14 AM, 22 August 2020) **Total Marks:** 1

While employing Trapezoidal and Simpson Rules to evaluate the double integral numerically, by using Trapezoidal and Simpson rule with respect to -------- variable/variables at time

Select the correct option

- (●) single
- ( ) both

MTH603:Quiz#2 Quiz Start Time: 10:37 AM, 22 August 2020

Question # 3 of 10 (Start time: 10:38:36 AM, 22 August 2020) Total Marks: 1

Given that $\frac{dy}{dt} = t + \sqrt{y}$ with the initial condition $y_0 = 1$ at $t_0 = 0$ Using Modified Euler's method, for the range $0 \leqslant t \leqslant 0.6$, h = 0.2 is

Select the correct option

Reload Math Equations

- 1.0
- 1.2
- 2.1
- 1.1

MTH603:Quiz#2

Quiz Start Time: 10:37 AM, 22 August 2020

Question # 4 of 10 (Start time: 10:38:55 AM, 22 August 2020) **Total Marks:** 1

Given that $\frac{dy}{dt} = 1 - \sqrt{y}$ with the initial condition $y_0 = 1$ at $t_0 = 0$ find the 2nd term of Taylor series when t=0.5 and y/ =0.

Select the correct option

Reload Math Equations

- 0.1
- 0.2
- 0 (selected)
- 0.3

MTH603:Quiz#2 Quiz Start Time: 10:37 AM, 22 August 2020

Question # 5 of 10 (Start time: 10:39:14 AM, 22 August 2020) Total Marks: 1

Simpson's rule is a numerical method that approximates the value of a definite integral by using .....polynomials.

Select the correct option

- Linear
- Quadratic
- Cubic
- None of the given choices

MTH603:Quiz#2 Quiz Start Time: 10:37 AM, 22 August 2020

Question # 6 of 10 (Start time: 10:39:36 AM, 22 August 2020) Total Marks:

While employing Trapezoidal and Simpson Rules to evaluate the double integral numerically, by using Trapezoidal and Simpson rule over --------.

Select the correct option

- (●) Plane region
- ( ) Real line

MTH603:Quiz#2 Quiz Start Time: 10:37 AM, 22 August 2020

Question # 7 of 10 (Start time: 10:39:56 AM, 22 August 2020) Total Marks: 1

Given that $\frac{dy}{dt} = t + y$ with the initial condition $y_0 = 1$ at $t_0 = 0$ find the 3rd term in Taylor series when t=1.5 and y// =0.6

Select the correct option

Reload Math Equations

- 1.15
- 1.25
- 1.35
- 1.45

MTH603:Quiz#2 Quiz Start Time: 10:37 AM, 22 August 202

Question # 8 of 10 (Start time: 10:40:27 AM, 22 August 2020) Total Marks:

In solving the differential equation

$$y' = x + y \;\; ; \;\; y(0) = 1$$

$$h = 0.2$$

Select the correct option

Reload Math Equations

- 0.1
- 0.2
- 1.01
- 1.02

MTH603:Quiz#2 Quiz Start Time: 10:37 AM, 22 August 2020

Question # 9 of 10 (Start time: 10:41:18 AM, 22 August 2020) Total Marks:

Given that $\frac{dy}{dt} = t + y$ with the initial condition $y_0 = 1$ at $t_0 = 1$ find the 3rd term in Taylor series when t=1.5 and y/ =1 and y// =1.2

Select the correct option

Reload Math Equations

- 0.1
- 0.2
- 0.3
- 0.4

MTH603:Quiz#2 Quiz Start Time: 10:37 AM, 22 August 2020

Question # 10 of 10 (Start time: 10:41:51 AM, 22 August 2020) Total Marks: 1

Given that $\frac{dy}{dt} = \frac{y-t}{y+t}$ with the initial condition $y = 1, \ t = 0$ find the 2nd term in Taylor series when t=0.2 and y/= 0.3.

Select the correct option

Reload Math Equations

- 0
- 0.01
- 0.02
- 0.06

2nd account

MTH603:Quiz#2 Quiz Start Time:

Question # 1 of 10 (Start time: 11:01:13 AM, 22 August 2020)

At which of the following points the Minimum value of 2nd derivative of function f(x) = -(2/x) in the interval:[1,4] exits?

Select the correct option

- (●) At x=1
- ( ) At x=2
- ( ) At x=3
- ( ) At x=4

MTH603:Quiz#2

Question # 2 of 10 (Start time: 11:01:57 AM, 22 August 2020)

Trapezoidal rule of integration of a definite integral is of.....

Select the correct option

- (●) O(h2)
- ( ) O(h3)
- ( ) O(h4)
- ( ) None of the given choices

MTH603:Quiz#2

Quiz Start Time: 11:01 AM, 22 August 2(

Question # 3 of 10 (Start time: 11:03:34 AM, 22 August 2020)

Total Mark

Given that $\frac{dy}{dt} = t + y$ with the initial condition $y_0 = 1$ at $t_0 = 0$ find the 2nd term in Taylor series when t=1, y/ =1.2, and h=0.1.

Select the correct option

Reload Math Equatio

- 1.3
- 1.2
- 1.4
- 1.5

MTH603:Quiz#2 Quiz Start Time: 11:01 AM, 22 August 2020

Question # 4 of 10 (Start time: 11:04:00 AM, 22 August 2020) Total Marks: 1

Given that $\frac{dy}{dt} = \frac{y-t}{y+t}$ with the initial condition y=1.01 at t=0.01. Using Euler's method, y at t= 0.04, h=0.05, the value of y(0.05) is

Select the correct option

Reload Math Equations

- 1.023
- 1.034
- 1.059 (selected)
- 1.068

MTH603:Quiz#2 Quiz Start Time: 11:01 AM, 22 August 2020

Question # 5 of 10 (Start time: 11:04:22 AM, 22 August 2020) Total Marks: 1

Given that $\frac{dy}{dt} = t + \sqrt{y}$ with the initial condition $y_0 = 1 \ at \ t_0 = 0$ find the 3rd term in Taylor series when t=1, y/ =0.2, y// =2, and h=0.1.

Select the correct option

Reload Math Equations

- 0.1
- 0
- 1
- 2

MTH603:Quiz#2 Quiz Start Time: 11:01 AM, 22 August 202

Question # 6 of 10 (Start time: 11:04:42 AM, 22 August 2020) Total Marks:

Given that $\frac{dy}{dt} = 1 - \sqrt{y}$ with the initial condition $y_0 = 1$ at $t_0 = 0$ find the 3rd term of Taylor series when t=0.5 and y// =0.25.

Select the correct option

Reload Math Equations

- 0.0425
- 0.0615
- 0.0625
- 0.0825

MTH603:Quiz#2 Quiz Start Time: 11:01 AM, 22 August 2020

Question # 7 of 10 (Start time: 11:05:05 AM, 22 August 2020) Total Marks: 1

Simpson's rule is a numerical method that approximates the value of a definite integral by using .....polynomials.

Select the correct option

- Linear
- Quadratic
- Cubic
- None of the given choices

MTH603:Quiz#2 Quiz Start Time: 11:01 AM, 22 August 2020

Question # 8 of 10 (Start time: 11:05:26 AM, 22 August 2020) Total Marks: 1

Given that $\frac{dy}{dt} = t + y$ with the initial condition $y_0 = 1$ at $t_0 = 1$ find the 3rd term in Taylor series when t=1.5 and y/ =1 and y// =1.2

Select the correct option

Reload Math Equations

- 0.1
- 0.2
- 0.3
- 0.4

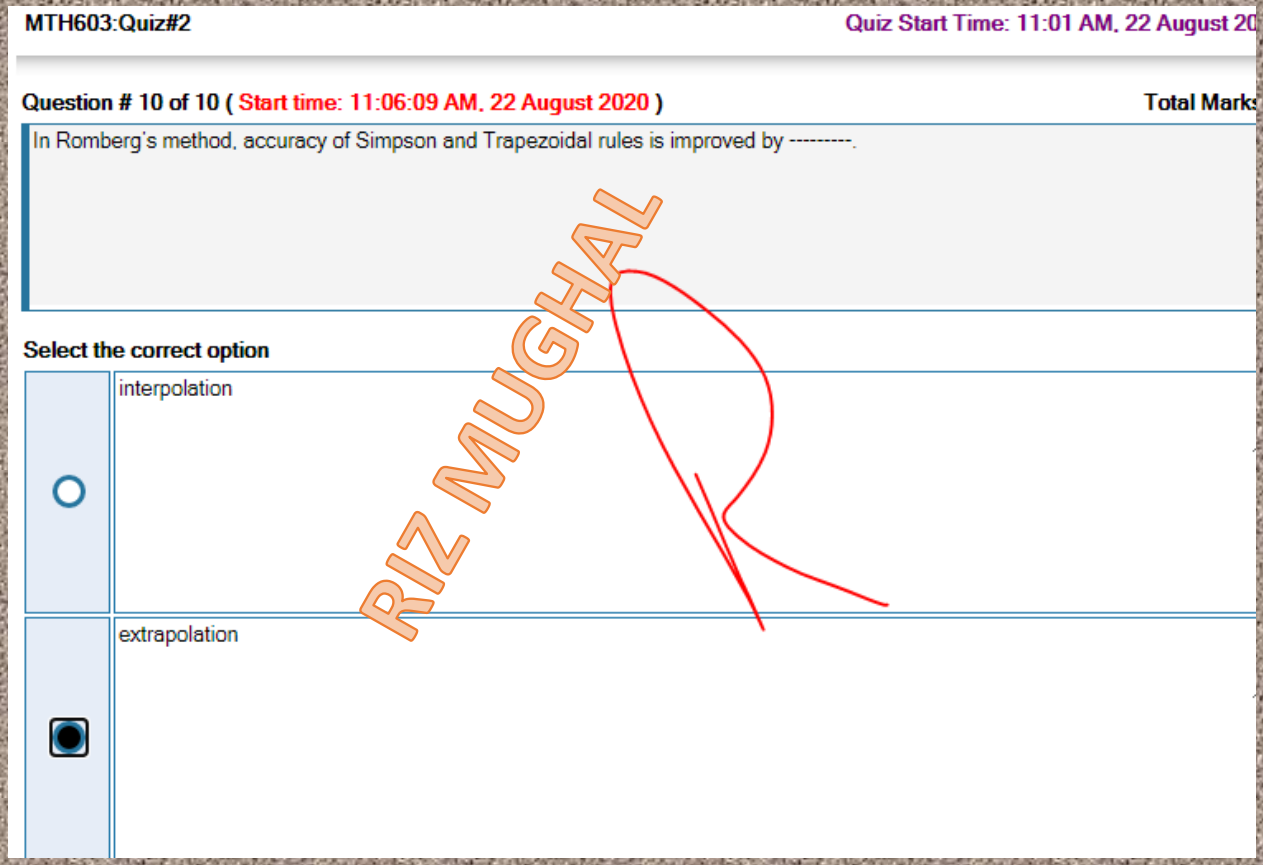
MTH603:Quiz#2 Quiz Start Time: 11:01 AM, 22 August 20

Question # 9 of 10 (Start time: 11:05:50 AM, 22 August 2020) Total Marks

Which of the following method is simplest one to integrate numerically a given tabular function but give more error?

Select the correct option

- (●) Rectangular method
- ( ) Trapezoidal method
- ( ) Simpson's 1/3 Rule
- ( ) Simpson's 3/8 Rule


MTH603:Quiz#2
Quiz Start Time: 11:01 AM, 22 August 20
Question # 10 of 10 (Start time: 11:06:09 AM, 22 August 2020)
Total Mark
In Romberg's method, accuracy of Simpson and Trapezoidal rules is improved by ---------.
Select the correct option
interpolation
extrapolation
RIZ MUGHAL

3rd account

MTH603:Quiz#2 Quiz Start Time: 03:18 PM, 22 A

Question # 1 of 10 (Start time: 03:18:45 PM, 22 August 2020) T

Simpson's rule is a numerical method that approximates the value of a definite integral by using .....polynomials.

Select the correct option

- Linear
- Quadratic
- Cubic
- None of the given choices

MTH603:Quiz#2 Quiz Start Time: 03:18 PM, 22 August 2020

Question # 2 of 10 (Start time: 03:19:13 PM, 22 August 2020) Total Marks:

Given that $\frac{dy}{dt} = t + y$ with the initial condition $y_0 = 1$ at $t_0 = 1$ find the 2nd term in Taylor series when t=1.5 and y/ =1.2.

Select the correct option

Reload Math Equations

- 0.4
- 0.5
- 0.6
- 0.7

MTH603:Quiz#2 Quiz

Question # 3 of 10 (Start time: 03:19:33 PM, 22 August 2020)

In solving the differential equation

$$y' = x + y \;\; ; \;\; y(0) = 1$$

$$h = 0.2$$

Select the correct option

- ○ 0.1
- ○ 0.2
- ◉ 1.01
- ○ 1.02

MTH603:Quiz#2 Quiz

Question # 4 of 10 (Start time: 03:19:52 PM, 22 August 2020)

In Romberg's method, accuracy of Simpson and Trapezoidal rules is improved by ---------.

Select the correct option

- interpolation
- extrapolation

MTH603:Quiz#2 Quiz Start Time: 03:

Question # 5 of 10 (Start time: 03:20:15 PM, 22 August 2020)

Given that $\frac{dy}{dt} = \frac{y-t}{y+t}$ with the initial condition $y = 1, \ t = 0$ Using Euler's method, y at

$$h = 0.01$$

; the value of y(0.01)is

Select the correct option

Rel

- 1.1
- 1.2
- 1.01 (selected)
- 1.02

MTH603:Quiz#2 Quiz Start Time: (

Question # 6 of 10 (Start time: 03:20:47 PM, 22 August 2020)

To evaluate a definite integral of tabular function f(x), piecewise quardratic approximation led to ---------

Select the correct option

- ○ Trapezoidal Method
- ◉ Simpson's Rule

MTH603:Quiz#2 Quiz Sta

Question # 7 of 10 (Start time: 03:21:14 PM, 22 August 2020)

Trapezoidal and Simpson's integrations are just a linear combination of values of the given function at different values of the .....variable.

Select the correct option

- ○ Dependent
- ◉ Independent
- ○ Arbitrary
- ○ None of the given choices

MTH603:Quiz#2

Question # 8 of 10 (Start time: 03:21:33 PM, 22 August 2020)

Trapezoidal rule of integration of a definite integral is of.....

Select the correct option

- (●) O(h2)
- ( ) O(h3)
- ( ) O(h4)
- ( ) None of the given choices

MTH603:Quiz#2 Quiz Start Time: 03:18 PM, 22 August 2020

Question # 9 of 10 (Start time: 03:21:54 PM, 22 August 2020) Total Marks:

Given that $\frac{dy}{dt} = t + \sqrt{y}$ with the initial condition $y_0 = 1 \ at \ t_0 = 0$ find the 3rd term in Taylor series when t=1, y/ =0.2, y// =2, and h=0.1.

Select the correct option

Reload Math Equations

- 0.1
- 0
- 1
- 2

MTH603:Quiz#2 Quiz Start Time: 03:18 PM, 22

Question # 10 of 10 (Start time: 03:22:20 PM, 22 August 2020) T

Which of the following method is simplest one to integrate numerically a given tabular function but give more error?

Select the correct option

- (●) Rectangular method
- ( ) Trapezoidal method
- ( ) Simpson's 1/3 Rule
- ( ) Simpson's 3/8 Rule

4th account

MTH603:Quiz#2 Quiz Start Time: 03:43 PM, 22 August 202

Question # 1 of 10 (Start time: 03:43:41 PM, 22 August 2020) Total Marks:

Given that $\frac{dy}{dt} = t + y$ with the initial condition $y_0 = 1$ at $t_0 = 0$ find the 2nd term in Taylor series when t=1, y/ =1.2, and h=0.1.

Select the correct option

Reload Math Equations

- 1.3
- 1.2
- 1.4
- 1.5

MTH603:Quiz#2

Quiz Start Time: 03:43 PM, 22 August 2020

Question # 2 of 10 (Start time: 03:44:14 PM, 22 August 2020)

Total Marks: 1

Given that $\frac{dy}{dt} = \frac{y-t}{y+t}$ with the initial condition $y = 1,\ t = 0$ find the 3rd term in Taylor series when t=0.3 and y//= 0.2.

Select the correct option

Reload Math Equations

- 0.012
- 0.014
- 0.016
- 0.018

MTH603:Quiz#2 Quiz Start Time: 03:43 PM, 22 August 2020

Question # 3 of 10 (Start time: 03:44:34 PM, 22 August 2020) **Total Marks:** 1

To evaluate numerically a double integral over a rectangular region bounded by the lines x = a, x =b, y = c, y = d we shall employ either trapezoidal rule or Simpson's rule, repeatedly with respect to .....variable at a time.

Select the correct option

- (●) One
- ( ) Two
- ( ) Three
- ( ) None of the given choices

MTH603:Quiz#2 Quiz Start Time: 03:43 PM, 22 August 2020

Question # 4 of 10 (Start time: 03:44:55 PM, 22 August 2020) Total Marks:

Given that $\frac{dy}{dt} = t + y$ with the initial condition $y_0 = 1$ at $t_0 = 1$ find the 2nd term in Taylor series when t=1.5 and y/ =1.2.

Select the correct option

Reload Math Equations

- 0.4
- 0.5
- 0.6
- 0.7

MTH603:Quiz#2 Quiz Start Time: 03:43 PM, 22 August 202

Question # 5 of 10 (Start time: 03:45:14 PM, 22 August 2020) Total Marks:

In Trapezoidal rule, we assume that f(x) is continuous on [a, b] and we divide [a, b] into n subintervals of equal length using the ..... points.

Select the correct option

- n
- n+1
- n-1
- None of the given choices

MTH603:Quiz#2 Quiz Start

Question # 6 of 10 (Start time: 03:45:32 PM, 22 August 2020)

In double integration, we keep one variable say x fixed and .....

Select the correct option

- Reliable the other variable y
- Varying the other variable y

MTH603:Quiz#2 Quiz Start Time: 03:43 PM

Question # 7 of 10 (Start time: 03:45:49 PM, 22 August 2020)

Geometrically the definite integral of any continuous function f(x) in the interval [a,b] gives ----------.

Select the correct option

- ○ Length of segment AB on real line
- ○ Volume with dimensions f(x), 'a' and 'b'
- ◉ Area under f(x) on [a,b]
- ○ Area of Trapezoid with dimension of 'a' and 'b'

MTH603:Quiz#2 Quiz Start Time: 03:43 PM, 22 August 2

Question # 8 of 10 (Start time: 03:46:07 PM, 22 August 2020) Total Mar

In Simpson's rule, we can estimate the integral by .....the areas under the parabolic arcs through three successive points.

Select the correct option

- [x] Adding
- [ ] Subtracting
- [ ] Multiplying
- [ ] None of the given choices

MTH603:Quiz#2

Quiz Start Time: 03:43 PM, 22 August 2020

Question # 9 of 10 (Start time: 03:46:27 PM, 22 August 2020) **Total Marks:** 1

Given that $\frac{dy}{dt} = 1 - \sqrt{y}$ with the initial condition $y_0 = 1$ at $t_0 = 0$ find the 2nd term of Taylor series when t=0.5 and y/ =0.

Select the correct option

Reload Math Equations

- 0.1
- 0.2
- 0 (selected)
- 0.3

MTH603:Quiz#2 Quiz Start Time: 03:43 PM, 22 August 2020

Question # 10 of 10 (Start time: 03:46:50 PM, 22 August 2020) Total Marks: 1

Given that $\frac{dy}{dt} = t + \sqrt{y}$ with the initial condition $y_0 = 1$ at $t_0 = 0$ find the 2nd term in Taylor series when t=1, y/ =0.2, and h=0.1.

Select the correct option

Reload Math Equations

- 0
- 0.1
- 0.2
- 0.3

5th account

MTH603:Quiz#2 Quiz Start Tir

Question # 1 of 10 (Start time: 03:52:54 PM, 22 August 2020)

Given that $\frac{dy}{dt} = \frac{y-t}{y+t}$ with the initial condition $y = 1, \ t = 0$ Using Euler's method, y at

$$h = 0.01$$

the value of y(0.01)is

Select the correct option

- 1.1
- 1.2
- 1.01 (selected)
- 1.02

MTH603:Quiz#2 Quiz Start Time: 03:

Question # 2 of 10 (Start time: 03:53:15 PM, 22 August 2020)

To evaluate a definite integral of tabular function f(x), piecewise linear approximation led to ---------.

Select the correct option

- (●) Trapezoidal Method
- ( ) Simpson's 1/3 Rule
- ( ) Simpson's 3/8 Rule
- ( ) Romberg's Method

MTH603:Quiz#2 Quiz Start Tim

Question # 3 of 10 (Start time: 03:53:33 PM, 22 August 2020)

Geometrically the definite integral of any continuous function f(x) in the interval [a,b] gives ----------.

Select the correct option

- ○ Length of segment AB on real line
- ○ Volume with dimensions f(x), 'a' and 'b'
- ◉ Area under f(x) on [a,b]
- ○ Area of Trapezoid with dimension of 'a' and 'b'

MTH603:Quiz#2 Quiz Start Time: 03:52 PM, 22 August 20

Question # 4 of 10 (Start time: 03:53:52 PM, 22 August 2020) Total Mark

Given that $\frac{dy}{dt} = t + y$ with the initial condition $y_0 = 1$ at $t_0 = 1$ find the 3rd term in Taylor series when t=1.5 and y/ =1 and y// =1.2

Select the correct option

Reload Math Equation

- 0.1
- 0.2
- 0.3
- 0.4

MTH603:Quiz#2 Quiz Start Time: 03:52 PM, 22 August

Question # 5 of 10 (Start time: 03:54:13 PM, 22 August 2020) Total Ma

Given that $\frac{dy}{dt} = \frac{y-t}{y+t}$ with the initial condition $y = 1,\ t = 0$ find the 2nd term in Taylor series when t=0.2 and y/= 0.3.

Select the correct option

Reload Math Equat

- 0
- 0.01
- 0.02
- 0.06

MTH603:Quiz#2 Quiz Start Time: 03:52 PM, 22 August

Question # 6 of 10 (Start time: 03:54:37 PM, 22 August 2020) Total Ma

Given that $\frac{dy}{dt} = t + \sqrt{y}$ with the initial condition $y_0 = 1$ at $t_0 = 0$ Using Modified Euler's method, for the range $0 \leqslant t \leqslant 0.6$, h = 0.2 is

Select the correct option

Reload Math Equati

- 1.0
- 1.2
- 2.1
- 1.1

MTH603:Quiz#2 Quiz Start Time: 03:52 PM, 22 August 20

Question # 7 of 10 (Start time: 03:54:56 PM, 22 August 2020) Total Marks

While employing Trapezoidal and Simpson Rules to evaluate the double integral numerically, by using Trapezoidal and Simpson rule over --------.

Select the correct option

- (●) Plane region
- ( ) Real line

MTH603:Quiz#2 Quiz Start Time: 03:52 PM, 22 Augu

Question # 8 of 10 (Start time: 03:55:38 PM, 22 August 2020) Total

Given that $\frac{dy}{dt} = t + \sqrt{y}$ with the initial condition $y_0 = 1$ at $t_0 = 0$ Using Modified Euler's method, for the range $0 \leqslant t \leqslant 0.6$, h = 0.1 is

Select the correct option

Reload Math Equ

- 1.0
- 1.2
- 2.1
- [x] 1.1

MTH603:Quiz#2 Quiz Start Time: 03:52 PM, 22 August 202

Question # 9 of 10 (Start time: 03:56:00 PM, 22 August 2020) **Total Marks:**

Given that $\frac{dy}{dt} = t + \sqrt{y}$ with the initial condition $y_0 = 1 \ at \ t_0 = 0$ find the 2nd term in Taylor series when t=1, y/ =0.2, and h=0.1.

Select the correct option

Reload Math Equations

- 0
- 0.1
- 0.2
- 0.3

MTH603:Quiz#2 Quiz Start

Question # 10 of 10 (Start time: 03:56:22 PM, 22 August 2020)

In double integration, we keep one variable say x fixed and .....

Select the correct option

- ○ Reliable the other variable y
- ◉ Varying the other variable y