8:08 vulms.vu.edu.pk/Qui: 25

**Question # 10 of 10 ( Start time: 08:08:12 PM, 21 August 2022 )**

The value of $\int_1^{\infty} \frac{dx}{x^2}$ _____.

**Select the correct option**

| | |
|---|---|
| ○ | 1 |
| ○ | 4 |
| ○ | 0 |
| ○ | 3 |

Time L

I Geometry (Quiz 2)

Quiz Start Time: 07:56 PM, 21 A

:06:42 PM, 21 August 2022 )

To

*The region bounded by the curves* $y = \sqrt{x}$ , $y = 1$ *and* $x = 4$

Reload Math

$\frac{1}{2}$

$\frac{5}{3}$

*None of these*

$0$

Click to Save Answer & Move to Next Q

*Find the area of the region between the $x-axis$, the $f(x)=x^3-x^2-2x;\ -1\leqslant x\leqslant 2$*

rrect option

Reload Math E

$\frac{3}{2}$

$\frac{37}{12}$

$\frac{45}{4}$

*None of these*

Click to Save Answer & Move to Next Qu

8:16 46%
vulms.vu.edu.pk/Quiz/

MTH101 - Calculus And Analytical Geometry (Quiz 2) Quiz Start Time: 08:14 PM, 21 Augu

Question # 3 of 10 ( Start time: 08:16:34 PM, 21 August 2022 ) Total

If we change the letter for the variable of integration but don't change the limits, then the values of the definite integral are unchanged.

Select the correct option

- False
- True

Click to Save Answer & Move to Next Que

8:15 46%
vulms.vu.edu.pk/Quiz/
26

BC220205096: HUSSNAIN ZULFIQAR

MTH101 - Calculus And Analytical Geometry (Quiz 2) Quiz Start Time

Question # 2 of 10 ( Start time: 08:15:43 PM, 21 August 2022 )

First fundamental theorem of calculus tells us how to evaluate the ..... in a quick way.

Select the correct option

- Definite integral
- None of these.
- Differential
- Indefinite integral

Click to Save Answer &

8:14

vulms.vu.edu.pk/Quiz/

BC220205096: HUSSNAIN ZULFIQAR

Time Left

MTH101 - Calculus And Analytical Geometry (Quiz 2)

Quiz Start Time: 08:14 PM, 21 Augus

Question # 1 of 10 ( Start time: 08:14:50 PM, 21 August 2022 )

Total M

The volume of a cylinder is the area of a cross section of the cylinder multiplied by the _____ of the cylinder.

Select the correct option

- Diameter
- Height
- Radius
- Base

Click to Save Answer & Move to Next Questi

8:17 46%
vulms.vu.edu.pk/Quiz/

BC220205096: HUSSNAIN ZULFIQAR

Time

MTH101 - Calculus And Analytical Geometry (Quiz 2)

Quiz Start Time: 08:14 PM, 21

Question # 4 of 10 ( Start time: 08:17:25 PM, 21 August 2022 )

EVERY continuous function on an interval has an anti-derivative .....

Select the correct option

- On that interval
- outside of interval

Click to Save Answer & Move to Next

8:18 45%

vulms.vu.edu.pk/Quiz/ 26

BC220205096: HUSSNAIN ZULFIQAR

Time Left

MTH101 - Calculus And Analytical Geometry (Quiz 2)

Quiz Start Time: 08:14 PM, 21 Augu

Question # 5 of 10 ( Start time: 08:18:06 PM, 21 August 2022 )

Total

For the adjacent intervals, [a,c] and [c,b],where c is any number,

$$\int_a^b f(x)dx =$$

Select the correct option

Reload Math Equ

- $\int_a^c f(x)dx + \int_b^a f(x)dx$
- $\int_a^c f(x)dx + \int_c^b f(x)dx$
- None of these
- $\int_a^b f(x)dx + \int_c^a f(x)dx$

Click to Save Answer & Move to Next Ques

III O <

8:19 45%

vulms.vu.edu.pk/Quiz/ 26

BC220205096: HUSSNAIN ZULFIQAR

MTH101 - Calculus And Analytical Geometry (Quiz 2) Quiz Start Time: 08:

Question # 6 of 10 ( Start time: 08:19:09 PM, 21 August 2022 )

The value of $\int_0^{\frac{\pi}{4}} \tan^2 x \, dx$ _____.

Select the correct option

Rel

| | |
|---|---|
| ○ | 0 |
| ○ | None of the above |
| ○ | $1 - \frac{\pi}{4}$ |
| ○ | $\frac{\pi}{4} - 1$ |

Click to Save Answer & Mov

III ○ <

8:20 PM

Quiz
vulms.vu.edu.pk

BC220206409: AMAIMA RAZZAQ

**MTH101 - Calculus And Analytical Geometry (Quiz 2)** **Quiz Start Time:**

**Question # 2 of 10 ( Start time: 08:20:27 PM, 21 August 2022 )**

The integral of f(x)=sin(2x) from x=0 to x=pi is .....

**Select the correct option**

- 0
- 2
- 1
- None of thes.

Click to Save Answer &

8:21 45%
vulms.vu.edu.pk/Quiz/
26

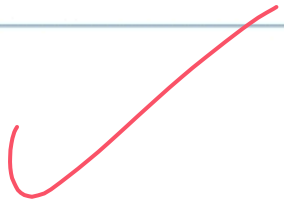
MTH101 - Calculus And Analytical Geometry (Quiz 2) Quiz Start Time

Question # 9 of 10 ( Start time: 08:21:32 PM, 21 August 2022 )

The value of $\int_1^x y^2 dy =$ _____.

Select the correct option

- $\frac{y^3}{3} - \frac{1}{3}$
- $\frac{x^3}{3} - \frac{1}{3}$



Click to Save Answer &

8:19 45%
vulms.vu.edu.pk/Quiz/
26

MTH101 - Calculus And Analytical Geometry (Quiz 2) Quiz Start Time: 0

Question # 7 of 10 ( Start time: 08:19:51 PM, 21 August 2022 )

The value of $\int_{1}^{10} 3x^2\,dx$ _____.

Select the correct option

- 999
- 333
- 99
- 33

Click to Save Answer & Mo

8:22 45%
vulms.vu.edu.pk/Quiz/
26

BC220205096: HUSSNAIN ZULFIQAR

Time Left 88 sec(s)

MTH101 - Calculus And Analytical Geometry (Quiz 2)

Quiz Start Time: 08:14 PM, 21 August 2022

Question # 10 of 10 ( Start time: 08:22:44 PM, 21 August 2022 )

Total Marks: 1

The conclusion of the 2nd fundamental theorem of calculus can be expressed in words as: "the derivative of an integral of a function is that....."

Select the correct option

- none of these
- Next function
- Previous function
- Original function

Click to Save Answer & Move to Next Question

|||

8:26 PM

Quiz
vulms.vu.edu.pk

Question # 6 of 10 ( Start time: 08:26:06 PM, 21 August 2022 )

If the upper and lower limits for the definite integral are the same, then $\int_a^a f(x)dx =$

Select the correct option

Reloc

- positive integer
- none of these
- negative integer
- zero

Click to Save Answer & Move

8:30 PM

Quiz
vulms.vu.edu.pk

**Question # 9 of 10 ( Start time: 08:30:37 PM, 21 August 2022 )**

F(x) (antiderivative of f) was determined to be 4x+C where C denotes the .....

**Select the correct option**

- Integration constant.
- Differentiation constant.

Click to Save Answer & Mo

**Question # 9 of 10 ( Start time: 08:55:07 PM, 21 August 2022 )**

The value of $\int_0^x t^3\,dt =$ _____.

**Select the correct option**

| | |
|---|---|
| ○ | $\frac{t^4}{4}$ |
| ○ | $\frac{x^4}{4}$ |
| ○ | $\frac{t^4}{4} - 1$ |
| ○ | None of the above |

The volume of solid obtained when the region under the curve $y = x^3$ over the interval [1,3] is revolved about the x-axis is

**Select the correct option**

| | |
|---|---|
| ○ | $V = \int_1^3 \pi x^3 \, dx$ |
| ○ | $V = \int_1^3 \pi x^6 \, dx$ |
| ○ | $V = \int_1^3 x^6 \, dx$ |
| ○ | $V = \int_1^3 \pi x^3 \, dy$ |

8:32 PM

Quiz
vulms.vu.edu.pk

Question # 10 of 10 ( Start time: 08:31:58 PM, 21 August 2022 )

In integration of $f(x) = x(x^2+1)^3$ from $x$=0 to $x$=2 by substitution method, we take $u = x^2 + 1$ then $du$= .....

Select the correct option

Reload Mc

| | |
|---|---|
| ○ | $dx$ |
| ○ | $2xdx$ |
| ○ | 1 |
| ○ | $xdx$ |

Click to Save Answer & Move to Ne

**Question # 6 of 10 ( Start time: 08:52:12 PM, 21 August 2022 )**

If the solid is revolved around the y-axis and generates a solid with a circular cross section of radius g(y) at y. Then the area of this cross section is

**Select the correct option**

Reload Math

| | |
|---|---|
| ○ | $\pi[g(y)]^2$ |
| ○ | $\pi\,[g(y)]$ |
| ○ | $\pi r[g(y)]^3$ |
| ○ | $[g(y)]^2$ |

**Question # 7 of 10 ( Start time: 08:53:08 PM, 21 August 2022 )**

The volume of solid obtained when the region under the curve x=y over the interval [1,4] is revolved about the y-axis is

**Select the correct option**

| | |
|---|---|
| ○ | $V = \int_1^4 \pi dx$ |
| ○ | $V = \int_1^4 \pi y dy$ |
| ○ | $V = \int_1^4 y^2 dy$ |
| ○ | $V = \int_1^4 \pi y^2 dy$ |

**Question # 8 of 10 ( Start time: 08:54:01 PM, 21 August 2022 )**

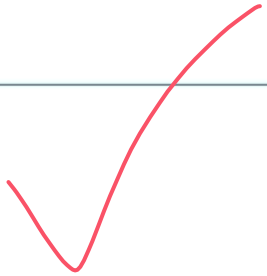
If the function and limits of definite integral are the same and variable of integration are changed, i.e

$$\int_a^b f(x)dx = \int_a^b f(t)dt$$

Then the answer would be

**Select the correct option**

| | |
|---|---|
| ○ | changed |
| ○ | do not changed |



**Question # 3 of 10 ( Start time: 08:48:11 PM, 21 August 2022 )**

If

$$\int_0^2 (x^2+1)dx = \frac{14}{3}$$

Then the solution of

$$\int_2^0 (x^2+1)dx =$$

will be....

**Select the correct option**

| | |
|---|---|
| ○ | 14/3 |
| ○ | -14/3 |
| ○ | -3/14 |
| ○ | none of these |

**Question # 4 of 10 ( Start time: 08:49:56 PM, 21 August 2022 )**

If sinx=t then dt=.....

**Select the correct option**

| | |
|---|---|
| ○ | sinxdt |
| ○ | cosxdx |
| ○ | -cosxdx |
| ○ | sinxdx |

**Question # 5 of 10 ( Start time: 08:50:56 PM, 21 August 2022 )**

The integral of f(x) =cos(2x) from x=0 to x=pi is .....

**Select the correct option**

| | |
|---|---|
| ○ | 3(pi) |
| ○ | None of these. |
| ○ | 0 |
| ○ | 2(pi) |

Which of the following is the definite integral of f(x) =x^2 from x=1 to x=2

**Select the correct option**

| | |
|---|---|
| ○ | 8/3 |
| ○ | 7/3 |
| ○ | None of these. |
| ○ | 7 |

**Question # 1 of 10 ( Start time: 08:46:40 PM, 21 August 2022 )**

If $f$ is continuous at every point of $[a, b]$ and $F$ is anti - derivative of $f$ on $[a, b]$, then

**Select the correct option**

| | |
|---|---|
| ○ | none of these |
| ○ | $\int_a^b f(x)dx = F(a) + F(b)$ |
| ○ | $\int_a^b f(x)dx = F(a) - F(b)$ |
| ○ | $\int_a^b f(x)dx = F(b) - F(a)$ ✓ |

Click to Sa

8:02 vulms.vu.edu.pk/Qui 25

MTH101 - Calculus And Analytical Geometry (Quiz 2) Quiz Start Time: 07:5

Question # 5 of 10 ( Start time: 08:02:45 PM, 21 August 2022 )

$\int_a^b f(x)dx = _____.$

Select the correct option

Rela

- $-\int_b^a f(x)dx$
- $\int_b^a f(x)dx$

Click to Save Answer & Move

8:03 vulms.vu.edu.pk/Qui: 25

**Question # 6 of 10 ( Start time: 08:03:46 PM, 21 August 2022 )**

..... can be used to find the area under the curve and volume of the solids.

**Select the correct option**

| | |
|---|---|
| ○ | Limit |
| ○ | Integration |
| ○ | none of these. |
| ○ | Differentiation |

8:04

vulms.vu.edu.pk/Qui:

25

Which of the following is the definite integral of f(x) =x^2 from x=1 to x=2

**Select the correct option**

| | |
|---|---|
| ○ | None of these. |
| ○ | 7 |
| ○ | 8/3 |
| ○ | 7/3 |

7:58
vulms.vu.edu.pk/Qui
25

**Question # 2 of 10 ( Start time: 07:58:08 PM, 21 August 2022 )**

The integral of f(x) =sin(x+1) from x=0 to x=1 is .....

**Select the correct option**

| | |
|---|---|
| ○ | sin(1)-sin(2) |
| ○ | cos(2)-cos(1) |
| ○ | cos(2)-1 |
| ○ | cos(1)-cos(2) |

7:56

vulms.vu.edu.pk/Qui:

25

Time Left 64 sec(s)

metry (Quiz 2)

Quiz Start Time: 07:56 PM, 21 August 2022

PM, 21 August 2022 )

Total Marks: 1

The area of the ellipse $\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$

Reload Math Equations

None of these

$\frac{1}{4}\pi(a^2 + b^2)$

$\pi ab$

$\pi(a + b)$

Click to Save Answer & Move to Next Question

alytical Geometry (Quiz 2) Quiz Start Time:

me: 07:59:19 PM, 21 August 2022 )

*The bounded region between the parabola* $y = 4x^2$ *and the line* $y = 6x - 2$

*None of these*

$\frac{1}{3}$

$\frac{1}{12}$

$\frac{1}{6}$

Click to Save Answer &

8:20 45%
vulms.vu.edu.pk/Quiz/ 26

BC220205096: HUSSNAIN ZULFIQAR

MTH101 - Calculus And Analytical Geometry (Quiz 2) Quiz Start Time: 0

Question # 8 of 10 ( Start time: 08:20:32 PM, 21 August 2022 )

The value of the $\int_0^1 t^3 dt =$ _____.

Select the correct option

- 1/3
- 2/3
- 4/3
- 1/4

Click to Save Answer & M

19:26 4G

$$Evaluate \frac{d}{dx}\int_1^x t^2 dt =$$

$-x^2$

$x^2$

$3x^2$

Click to Sav

19:27

Quiz
vulms.vu.edu.pk

H101 - Calculus And Analytical Geometry (Quiz 2)

estion # 9 of 10 ( Start time: 07:27:22 PM, 21 August 2022 )

' the function and limits of definite integral are the same and variable of integration are changed, i.e

$$\int_a^b f(x)dx = \int_a^b f(t)dt$$

hen the answer would be

ect the correct option

- do not changed
- changed

Click

19:29 4G
Quiz
vulms.vu.edu.pk

$\int_a^b f(x)dx = _____.$

**Select the correct option**

- $\int_b^a f(x)dx$
- $-\int_b^a f(x)dx$

19:25

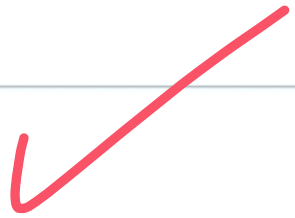
Quiz
vulms.vu.edu.pk

Question # 7 of 10 ( Start time: 07:25:11 PM, 21 August 2022 )

We cannot evaluate definite integrals by substitution method.

Select the correct option

- True
- False



19:23

Quiz
vulms.vu.edu.pk

uestion # 6 of 10 ( Start time: 07:23:38 PM, 21 August 2022 )

The volume V of a cylinder with base area A and height h is calculated by -----

elect the correct option

- V = A h^3
- V = A h^2
- V = 2A h
- V = A h

19:22

Quiz
vulms.vu.edu.pk

The value of $\int_0^{\frac{\pi}{4}} \tan^2 x \, dx$ _____.

**Select the correct option**

- $1 - \frac{\pi}{4}$
- 0
- $\frac{\pi}{4} - 1$
- None of the above

Click to Save Ans

19:18

Quiz
vulms.vu.edu.pk

Question # 2 of 10 ( Start time: 07:18:16 PM, 21 August 2022 )

_____ is used to prove the first fundamental theorem of calculus.

**Select the correct option**

- Intermediate value theorem
- None of these.
- Mean value theorem for the derivatives
- Mean value theorem for the integrals

19:19

Quiz
vulms.vu.edu.pk

07:19:17 PM, 21 August 2022 )

*The bounded region between the parabola* $y = 4x^2$ *and the line* $y = 6x - 2$

Relo

$\frac{1}{6}$

*None of these*

$\frac{1}{3}$

$\frac{1}{12}$

Click to Save Answer & Move

BC220204480: AYESHA MUSHTAQ

Time Left 74 sec(s)

MTH101 - Calculus And Analytical Geometry (Quiz 3)

Quiz Start Time: 07:16 PM, 21 August 2022

Question # 4 of 10 ( Start time: 07:20:48 PM, 21 August 2022 )

Total Marks: 1

If the solid is revolved around the y-axis and generates a solid with a circular cross section of radius g(y) at y. Then the area of this cross section is

Select the correct option

Reload Math Equations

- $[g(y)]^3$
- $\pi[g(y)]^2$
- $\pi+[g(y)]^3$
- $\pi[g(y)]$

Click to Save Answer & Move to Next Question

**Question # 1 of 10 ( Start time: 07:16:34 PM, 21 August 2022 )**

The value of $\int_1^x y^2 dy =$ _____.

**Select the correct option**

| | |
|---|---|
| ○ | $\frac{y^3}{3} - \frac{1}{3}$ |
| ○ | $\frac{x^3}{3} - \frac{1}{3}$ ✓ |

19:16

Quiz
vulms.vu.edu.pk

BC220204480: AYESHA MUSHTAQ

Time Left 87 sec(s)

MTH101 - Calculus And Analytical Geometry (Quiz 2)

Quiz Start Time: 07:16 PM, 21 August 2022

Question # 1 of 10 ( Start time: 07:16:34 PM, 21 August 2022 )

Total Marks: 1

The value of $\int_1^2 y^2 dy =$ _____

Select the correct option

Reload Math Equations

$\frac{y^3}{3} - \frac{1}{3}$

$\frac{y^3}{3} - \frac{1}{3}$

Click to Save Answer & Move to Next Question