

Question # 8 of 10 (Start time: 01:25:12 PM, 13 August 2021)

If $f(z)$ is complex valued function and C and $-C$ be the contours with same geometrical representation but opposite in direction. Then

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Select the correct option

Reload Mat

$$\int_C f(-z) dz$$

$$\int_C f(z) dz$$

$$-\int_C f(z) dz$$

$$-\int_C f(z) dz$$

Let z_0 and z_1 be two points in simply connected domain D
and f be an analytic complex valued function in D and C be contour by joining z_0 and z_1 then

Select the correct option



$$\int_{z_0}^{z_1} f(s) ds = F(z_1) - F(z_0)$$

$$\int_{z_0}^{z_1} f(s) ds = F(z_0) + F(z_0)$$

$$\int_{z_0}^{z_1} f(s) ds = F(z_0) - F(z_1)$$

Consider function $f(z) = \exp(z^2 + 1)$ be differentiable and its derivatives are continuous in domain D then $\int_C f(z) dz = \dots$ wh

Select the correct option

- | | |
|----------------------------------|----|
| <input type="radio"/> | 1 |
| <input checked="" type="radio"/> | 0 |
| <input type="radio"/> | -1 |
| <input type="radio"/> | 2 |

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If function f is an analytic function in simple connected domain where $C_R(z_0) = \{z(t) : |z - z_0| = R\}, 0 \leq t \leq 2\pi$ and R be the radius of circle, then

correct option

Reload Math Equations

$$f(z_0) = \frac{1}{\pi} \int_0^{2\pi} f(z_0 + Re^{it}) dt$$

$$f(z_0) = \frac{1}{2\pi} \int_0^{2\pi} f(z_0 + Re^{it}) dt$$



$$f(z_0) = \frac{1}{4\pi} \int_0^{2\pi} f(z_0 + Re^{it}) dt$$

$$f(z_0) = \frac{1}{2\pi i} \int_0^{2\pi} f(z_0 + Re^{it}) dt$$

Find value of Green's theorem if $P=x^2$ and $Q=y^2$ for region $x=1$ and $y=2$ from origin.

Select the correct option

- 0
- 2
- 1
- 2



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Evaluate the integral $\int_C \frac{e^z}{z^4} dz$ where the contour $C: |z|=1$

The correct option

[Reload Math Equations](#)

$\frac{2\pi i}{3}$

$\frac{4\pi i}{3}$

$\frac{8\pi i}{3}$

$\frac{\pi i}{3}$

Evaluate the integral $\int_C f(z) dz$ where $C: z(t) = e^{it}$ for $0 \leq t \leq \pi$ and $f(z) = 1/z^2$

Correct option

[Reload Math Equations](#)

$$1 - e^{i\pi}$$

$$1 + e^{-i\pi}$$

$$1 + e^{i\pi}$$

$$1 - e^{-i\pi}$$

Question # 4 of 10 (Start time: 01:19:45 PM, 13 August 2021)

A curve C is said to be a contour if it is constructed by joining finitely many smooth curves end to end.

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Select the correct option

<input type="radio"/>	False
<input checked="" type="radio"/>	True

Evaluate $\int_C f(z)dz$ where $C : z(t) = (x + iy)t$ for $a \leq t \leq b$ and $f(z) = z$

option

[Reload Math Equations](#)

$$\frac{(b^2 - a^2)(x + iy)^2}{2}$$

$$\frac{(b^2 + a^2)(x + iy)}{2}$$

$$\frac{(b^2 - a^2)(x + iy)}{2}$$

$$\frac{(b^2 + a^2)(x + iy)^2}{2}$$

MC200203376: MAAZ

Time Left 85 sec(s)

MTH632: Quiz # 3

Quiz Start Time 08:30 PM, 12 August 2021

Question # 9 of 10 (Start time: 12:40:16 PM, 13 August 2021)

Total Marks:

Let $f(z)$ be continuous function on contour C and L be length of C . For all z in contour C , $|f(z)| < M$ then

Select the correct option

Reveal Math Equations

- $|\int_C f(z) dz| > ML$
- $|\int_C f(z) dz| > ML$
- $|\int_C f(z) dz| < ML$
- $|\int_C f(z) dz| < ML$

View Correct Answer (0/10/0)

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Question # 8 of 10 (Start time: 12:37:37 PM, 13 August 2021)


Total Marks: 1

If function f is an analytic function in simple connected domain where $C_R(z_0) = \{z(t) : |z - z_0| = R\}, 0 \leq t \leq 2\pi$ and R be the radius of circle, then

Select the correct option

Reload Math Equations

$$f(z_0) = \frac{1}{\pi} \int_0^{2\pi} f(z_0 + Re^{it}) dt$$


$$f(z_0) = \frac{1}{2\pi} \int_0^{2\pi} f(z_0 + Re^{it}) dt$$

$$f(z_0) = \frac{1}{4\pi} \int_0^{2\pi} f(z_0 + Re^{it}) dt$$

$$f(z_0) = \frac{1}{2\pi i} \int_0^{2\pi} f(z_0 + Re^{it}) dt$$

Click to Save Answer & Move to Next Question

Let α lies in the interior of contour C and
 $P_n(z) = a_n z^n + a_{n-1} z^{n-1} + a_{n-2} z^{n-2} + \dots + a_1 z + a_0 z^0$
then the value of $\int_C \frac{P_n(z)}{z - \alpha} dz$ is ... when $n = 3$

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Correct option

Reload Math Equations

 $2\pi i P_3(\alpha)$

$2\pi i P_n(\alpha)$

$2\pi P_3(\alpha)$

$2\pi P_n(\alpha)$



MC200203376: MAAZ

Time Left 86
sec(s)

MTH632 Quiz # 3

Quiz Start Time 08:30 PM, 12 August 2021

Question # 8 of 10 (Start time: 12:37:37 PM, 13 August 2021)

Total Marks:

If function f is an analytic function in simple connected domain where $C_R(z_0) = \{z(t) : |z - z_0| = R\}, 0 < t < 2\pi$ and R be the radius of circle, then

Select the correct option

Reveal Math Equations

$$f(z_0) = \frac{1}{\pi} \int_0^{2\pi} f(z_0 + Re^{it}) dt$$

$$f(z_0) = \frac{1}{2\pi} \int_0^{2\pi} f(z_0 + Re^{it}) dt$$

$$f(z_0) = \frac{1}{4\pi} \int_0^{2\pi} f(z_0 + Re^{it}) dt$$

$$f(z_0) = \frac{1}{2\pi i} \int_0^{2\pi} f(z_0 + Re^{it}) dt$$

Click to Show Answer / Hide Answer (Correct)



Let C_1 and C_2 be two simple closed contours with positively oriented x - C_1 is a circle and C_2 is an ellipse. If $f(z)$ is analytic in domain that contains both contours and region between them, then:

- Which of the correct option
- $\int_{C_1} f(z) dz = \int_{C_2} f(z) dz$
 - $\int_{C_1} f(z) dz < \int_{C_2} f(z) dz$
 - $\int_{C_1} f(z) dz > \int_{C_2} f(z) dz$
 - $\int_{C_1} f(z) dz = - \int_{C_2} f(z) dz$

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41209166476_94442 Time Left 00:00:00

VT1652 Quiz # 8 Quiz Start Time: 08:38 PM, 12 August 2021

Question 17 of 18 | Start Time: 12:55:03 PM, 12 August 2021 Time Left 00:00:00

Let C_1 and C_2 be two simple closed contours with positively oriented x - C_1 as reference and C_2 as an interior. If $f(z)$ is analytic in domain that contains both contours and region between them, then:

What is the correct option? Submit Answer

- $\int_{C_1} f(z) dz - \int_{C_2} f(z) dz$
- $\int_{C_1} f(z) dz < \int_{C_2} f(z) dz$
- $\int_{C_1} f(z) dz \geq \int_{C_2} f(z) dz$
- $\int_{C_1} f(z) dz > \int_{C_2} f(z) dz$

0/100 (0%) Correct Answer

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MC200203376: MAAZ

Time Left 84 sec(s)

MTH632 Quiz # 3

Quiz Start Time 08:30 PM, 12 August 2021

Question # 6 of 10 (Start time: 12:34:11 PM, 13 August 2021)

Total Marks:

Consider the integral $\int_C f(z) dz$ where contour $C(z) = e^z$, $L = 2\pi$ and $f(z) = z$. The upper bound is

Select the correct option

Reveal Math Equations

- $-\pi$
- -2π
- π
- 2π

Correct Answer: (Marked Correct)

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Inequalities Involving Contour Integrals

Theorem (ML inequality)

If $f(z)$ is continuous on contour C , then

$$\left| \int_C f(z) dz \right| \leq ML$$

quiz

Where L is length of the contour and M is upper bound for the modulus $|f(z)|$ on C , that is,

$$|f(z)| \leq M, \quad \text{for all } z \in C.$$

Proof:

Inequalities Involving Contour Integrals

Example ($|\int_C f(z) dz| \leq ML$): Find upper bound of

$$\int_C z dz$$

where $C: z(t) = e^{it}, 0 \leq t \leq 2\pi$

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Quiz

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MC200203376: MAAZ

Time Left 63 sec(s)

MTH632 Quiz # 3

Quiz Start Time 08:30 PM, 12 August 2021

Question # 3 of 10 (Start time: 12:29:26 PM, 13 August 2021)

Total Marks:

Let α lie in the interior of contour C and

$$P_n(z) = a_n z^n + a_{n-1} z^{n-1} + a_{n-2} z^{n-2} + \dots + a_1 z + a_0 z^0$$

 then the value of $\int_C \frac{P_n(z)}{z - \alpha} dz$ is ... when $n = 3$

Select the correct option

Related Math Equations

- | | |
|-----------------------|---------------------|
| <input type="radio"/> | $2\pi P_n(\alpha)$ |
| <input type="radio"/> | $2\pi P_3(\alpha)$ |
| <input type="radio"/> | $2\pi P_n'(\alpha)$ |
| <input type="radio"/> | $2\pi P_3'(\alpha)$ |

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MC200203376: MAAZ

Time Left 86 sec(s)

MTH632 Quiz # 3

Quiz Start Time 08:30 PM, 12 August 2021

Question # 2 of 10 (Start time: 12:28:23 PM, 13 August 2021)

Total Marks:

Mathematically, the functions in Green's theorem will be

Select the correct option

- Continuous derivatives
- Discrete partial derivatives
- Continuous partial derivatives
- Discrete derivatives

Submit Answer / Stop Quiz



If the interior of every simple closed contour C is contained in the domain D , then domain is said to be....

Select the correct option

- Unbounded
- Disconnected
- Simple connected
- None of above



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Submit Answer / Cancel / Previous Question



MC200203376: MAAZ

Time Left 83 sec(s)

MTH632 Quiz # 3

Quiz Start Time 08:30 PM, 12 August 2021

Question # 5 of 10 (Start time: 12:32:58 PM, 13 August 2021)

Total Marks:

Let $f(z)$ be an analytic in a domain D and D be the interior and boundary of the circle ' r ' defined as $|z - a| = r$ and $|f(z)| < M$, then $|f^{(n)}(a)| < \frac{n!M}{r^n}$

Select the correct option

Reveal Math Equations

- ML Inequality
- Cauchy inequality
- Cauchy Schwarz inequality
- None of above

12:33:00 Question # 5 of 10 (Completed)



Quiz

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MC200203376: MAAZ

Time Left 84 sec(s)

MTH632 Quiz # 3

Quiz Start Time 08:30 PM, 12 August 2021

Question # 3 of 10 (Start time: 12:29:26 PM, 13 August 2021)

Total Marks:

Let α lie in the interior of contour C and

$$P_n(z) = a_n z^n + a_{n-1} z^{n-1} + a_{n-2} z^{n-2} + \dots + a_1 z + a_0 z^0$$

then the value of $\int_C \frac{P_n(z)}{z - \alpha} dz$ is ... when $n = 3$

Select the correct option

Revised Math Equations

- | | |
|-----------------------|---------------------|
| <input type="radio"/> | $2\pi P_n(\alpha)$ |
| <input type="radio"/> | $2\pi P_3(\alpha)$ |
| <input type="radio"/> | $2\pi P_n'(\alpha)$ |
| <input type="radio"/> | $2\pi P_3'(\alpha)$ |

Calculator Allowed (Only for Question #3)



MC200203376: MAAZ

Time Left 85 sec(s)

MTH632 Quiz # 3

Quiz Start Time 08:30 PM, 12 August 2021

Question # 10 of 10 (Start time: 12:41:08 PM, 13 August 2021)

Total Marks:

If $f(z)$ is an analytic function in domain D then for $n > 0$ where n is a positive integer,

Select the correct option

Reveal Math Equations

- $f^{(n)}(z)$ is analytic in disconnected D
- None of above
- $f^{(n)}(z)$ is not analytic in simple connected D
- $f^{(n)}(z)$ is an analytic in simple connected D

Correct Answer: $f^{(n)}(z)$ is an analytic in simple connected D



MC200203376: MAAZ

Time Left 63 sec(s)

MTH632 Quiz # 3

Quiz Start Time: 08:30 PM, 12 August 2021

Question # 3 of 10 (Start time: 12:29:26 PM, 13 August 2021)

Total Marks:

Let α lie in the interior of contour C and

$$P_n(z) = a_n z^n + a_{n-1} z^{n-1} + a_{n-2} z^{n-2} + \dots + a_1 z + a_0 z^0$$

 then the value of $\int_C \frac{P_n(z)}{z - \alpha} dz$ is ... when $n = 3$

Select the correct option

Reveal Math Equations

- $2\pi P_n(\alpha)$
- $2\pi P_3(\alpha)$
- $2\pi P_n(\alpha)$
- $2\pi P_3(\alpha)$

Submit Answer / Save Answer

Question # 4 of 10 (Start time: 01:19:45 PM, 13 August 2021)

A curve C is said to be a contour if it is constructed by joining finitely many smooth curves end to end.

Select the correct option



False



True





MC200203376: MAAZ

Time Left 85 sec(s)

MTH632-Quiz # 3

Quiz Start Time: 08:30 PM, 12 August 2021

Question # 10 of 10 (Start time: 12:41:08 PM, 12 August 2021)

Total Marks:

If $f(z)$ is an analytic function in domain D then for $n > 0$ where n is a positive integer,

Select the correct option

Answer Multiple Questions

- $f^{(n)}(z)$ is analytic in disconnected D
- None of above
- $f^{(n)}(z)$ is not analytic in simple connected D
- $f^{(n)}(z)$ is an analytic in simple connected D

Submit Answer / Cancel / Flag Question





MC200203376: MAAZ

Time Left 84 sec(s)

MTH632 Quiz # 3

Quiz Start Time: 08:30 PM, 12 August 2021

Question # 3 of 10 (Start time: 12:29:26 PM, 13 August 2021)

Total Marks:

Let α lie in the interior of contour C and

$$P_n(z) = a_n z^n + a_{n-1} z^{n-1} + a_{n-2} z^{n-2} + \dots + a_1 z + a_0 z^0$$

 then the value of $\int_C \frac{P_n(z)}{z - \alpha} dz$ is ... when $n = 3$

Select the correct option

Reveal Math Equations

- $2\pi P_n(\alpha)$
- $2\pi P_3(\alpha)$
- $2\pi P_n(\alpha)$
- $2\pi P_3(\alpha)$

Submit Answer / Save Answer





Quiz

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MC200203376: MAAZ

Time Left 83 sec(s)

MTH632 Quiz # 3

Quiz Start Time: 08:30 PM, 12 August 2021

Question # 5 of 10 (Start time: 12:32:58 PM, 13 August 2021)

Total Marks:

Let $f(z)$ be an analytic in a domain D and D' be the interior and boundary of the circle $|z - a| = r$ and $|f(z)| < M$, then $|f^{(n)}(a)| < \frac{n!M}{r^n}$

Select the correct option

Select All Questions

- | | |
|----------------------------------|-------------------------------------------------------------------------------------------------|
| <input checked="" type="radio"/> | ML Inequality  |
| <input type="radio"/> | Cauchy Inequality |
| <input type="radio"/> | Cauchy Schwarz Inequality |
| <input type="radio"/> | None of above |

1/3 | Back | Forward | Home | Exit | Help





MC200203376: MAAZ

Time Left 86 sec(s)

MTH632-Quiz # 3

Quiz Start Time 08:30 PM, 12 August 2021

Question # 8 of 10 (Start time: 12:37:37 PM, 13 August 2021)

Total Marks:

If function f is an analytic function in simple connected domain where $C_R(z_0) = \{z(t) : |z - z_0| = R\}, 0 < t < 2\pi$ and R be the radius of circle, then

Select the correct option

Answer Math Equations

- $f(z_0) = \frac{1}{\pi} \int_0^{2\pi} f(z_0 + Re^{i\theta}) d\theta$
- $f(z_0) = \frac{1}{2\pi} \int_0^{2\pi} f(z_0 + Re^{i\theta}) d\theta$
- $f(z_0) = \frac{1}{4\pi} \int_0^{2\pi} f(z_0 + Re^{i\theta}) d\theta$
- $f(z_0) = \frac{1}{2\pi i} \int_0^{2\pi} f(z_0 + Re^{i\theta}) d\theta$

Submit Answer



MC200000016: MAAT2 Time Left: 00:00

Question 17 of 18 | Start Time: 12:32:00 PM | 18 August 2021 Time Left: 00:00

Let C₁ and C₂ be two simple closed contours with positively oriented x-axis, in reference and C₂, in an arbitrary. If f(z) is analytic in domain that contains both contours and region between them, it

What is the correct option? Submit Answer

- $\int_{C_1} f(z) dz - \int_{C_2} f(z) dz$
- $\int_{C_1} f(z) dz + \int_{C_2} f(z) dz$
- $\int_{C_1} f(z) dz \geq \int_{C_2} f(z) dz$
- $\int_{C_1} f(z) dz = \int_{C_2} f(z) dz$

Submit Answer



MC200203376: MAAZ

Time Left 84 sec(s)

MTH632-Quiz # 3

Quiz Start Time: 08:30 PM, 12 August 2021

Question # 6 of 10 (Start time: 12:34:11 PM, 12 August 2021)

Total Marks:

Consider the integral $\int_C f(z) dz$ where contour $C(z) = e^z$, $L = 2\pi$ and $f(z) = z$. The upper bound is

Select the correct option

Report Mistake

- π
- 2π
- π
- 2π

Previous Question | Next Question



MC200203376: MAAZ

Time Left 85 sec(s)

MTH632-Quiz # 3

Quiz Start Time: 08:30 PM, 12 August 2021

Question # 9 of 10 (Start time: 12:40:16 PM, 12 August 2021)

Total Marks:

Let $f(z)$ be continuous function on contour C and L be length of C . For all z in contour C , $|f(z)| < M$ then

Select the correct option

Report Mark Equivocate

- $|\int_C f(z) dz| > ML$
- $|\int_C f(z) dz| > ML$
- $|\int_C f(z) dz| < ML$
- $|\int_C f(z) dz| < ML$

Submit Answer



MC200203376: MAAZ

Time Left 07:00

MTH432 Quiz # 3

Quiz Start Time: 08:30 PM, 12 August 2021

Question # 4 of 10 (Start time: 12:31:37 PM, 12 August 2021)

Total Marks:

If the interior of every simple closed contour C is contained in the domain D , then domain is said to be....

Select the correct option

- Unbounded
- Disconnected
- Simple connected
- None of above

Submit Answer



MC200000016: MAAT Time Left: 00:00

Q11652: Ques 1 Show Start Time: 08:08 PM 12 August 2021

Section 1.7 of 18 | Start Time: 12:00:00 PM 12 August 2021 Show Ans

D, C, and C in two separate closed contours with positively oriented x - OC , OC reference and O , is an antiderivative of $f(z)$ to establish to identify to identify that contour both contours and region between them, is

What is the correct option? Show Correct Answer

- $\int_C f(z) dz - \int_C f(z) dz$
- $\int_C f(z) dz - \int_C f(z) dz$
- $\int_C f(z) dz + \int_C f(z) dz$
- $\int_C f(z) dz - \int_C f(z) dz$

Submit Answer

Question # 8 of 10 (Start time: 12:37:37 PM, 13 August 2021)

Total Marks: 1

If function f is an analytic function in simple connected domain where $C_R(z_0) = \{z(t) : |z - z_0| = R\}, 0 \leq t \leq 2\pi$ and R be the radius of circle, then

Select the correct option



$$f(z_0) = \frac{1}{\pi} \int_0^{2\pi} f(z_0 + Re^{it}) dt$$



$$f(z_0) = \frac{1}{2\pi} \int_0^{2\pi} f(z_0 + Re^{it}) dt$$

$$f(z_0) = \frac{1}{4\pi} \int_0^{2\pi} f(z_0 + Re^{it}) dt$$

$$f(z_0) = \frac{1}{2\pi i} \int_0^{2\pi} f(z_0 + Re^{it}) dt$$

[Click to Save / Answer / Move to Next Question](#)

MC200200763: AKHTER ZAMAN

Time Left 03 min(s)

MTH422: Quiz # 2

Quiz Start Time: 09:47 AM, 13 August 2021

Question # 3 of 10 (Start time: 09:48:08 AM, 13 August 2021)

Total Marks:

Using Cauchy integral formula to compute the value of integral

$$\int_C \frac{z-2}{z+i} dz \text{ where } f(z) = z-2 \text{ and } z_0 = -i$$

Select the correct option

Related Math Equations

- $2\pi(1-2i)$
- $2\pi(1+2i)$
- $2\pi(-1+2i)$
- $2\pi(-1-2i)$

Submit Answer



MC200203376: MAAZ

Time Left 86 sec(s)

MTH632 Quiz # 3

Quiz Start Time: 08:30 PM, 12 August 2021

Question # 3 of 10 (Start time: 12:28:23 PM, 12 August 2021)

Total Marks:

Mathematically, the functions in Green's theorem will be

Select the correct option

- Continuous derivatives
- Discrete partial derivatives
- Continuous partial derivatives
- Discrete derivatives



Time: 08:30 PM, 12 August 2021

