Question # 6 of 10 (Start time: 06:41:35 PM, 01 June 2021) Total Mar

If $(-R, R)$ is the interval of convergence of the power series $f(x) = \sum_{n=0}^{\infty} a_n x^n$, then the convergence of power series at $x = \pm R$, depends on the - - - - - - .

Select the correct option

Reload Math Equati

O	length of interval of convergence
O	nature of $\sum_{n=0}^{\infty} x^n$
O	continuity of $f(x)$
O	nature of sequence $\{a_n\}_{n \in \mathbb{N}}$

Click to Save Answer & Move to Next Question

58% 8:26
quiz.vu.edu.pk/QuizQues

BC180201528: NIMRA ABBAS

Time Left 89 sec(s)

MTH631:quiz 1

Quiz Start Time: 08:26 PM, 01 June 2021

Question # 1 of 10 (Start time: 08:26:29 PM, 01 June 2021)

Total Marks: 1

Which of the following can NEVER be as the precise set of points of convergence of a Power Series?

Select the correct option

- Open intervals on Real Line
- An arbitrary subset of Real Line
- Union of open intervals on Real Line
- Intersection of open intervals on Real Line

not sure

Click to Save Answer & Move to Next Question

3G 4G 58% 8:31
quiz.vu.edu.pk/QuizQue

BC180201528: NIMRA ABBAS

Time Left 88 sec(s)

MTH631:quiz 1

Quiz Start Time: 08:26 PM, 01 June 2021

Question # 8 of 10 (Start time: 08:31:55 PM, 01 June 2021)

Total Marks: 1

If $(-R, R)$ is the interval of convergence of the power series $f(x) = \sum_{n=0}^{\infty} a_n x^n$, then the convergence of power series at $x = \pm R$, depends on the - - - - - - .

Select the correct option

Reload Math Equations

- length of interval of convergence
- nature of $\sum_{n=0}^{\infty} x^n$
- continuity of $f(x)$
- nature of sequence $\{a_n\}_{n \in N}$

not sure

Click to Save Answer & Move to Next Question

Question # 10 of 10 (Start time: 07:58:18 PM, 01 June 2021)

The power series $\sum_{n=0}^{\infty}(n!)x^n$ converges -------.

Select the correct option

- $\forall x \in (-1,1)$
- $\forall x \in \mathbb{R}$
- for $x = 0$ only
- for $x = 1$ only

Type here to search

6:34 97%

Quiz
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BC180203132: MUHAMMAD KHALIL

Time Left 75 sec(s)

MTH631:quiz 1

Quiz Start Time: 06:34 PM, 01 June 2021

Question # 1 of 10 (Start time: 06:34:11 PM, 01 June 2021)

Total Marks: 1

If a power series $\sum_{n=0}^{\infty} a_n (x - x_0)^n$ converges to a function $f(x)$, then the domain of $f(x)$ is - - - - - - as that of the interval of convergence of power series.

Select the correct option

Reload Math Equations

- not necessarily the same
- same and equal



Click to Save Answer & Move to Next Question

Quiz List | Quiz

quiz.vu.edu.pk/QuizQuestion.aspx?ver=fede1cb4-a836-43f7-9ade-d401c64bdf80

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MTH631 quiz 1

Question # 5 of 10 (Start time: 09:33:53 PM, 01 June 2021)

If $(-R, R)$ is the interval of convergence of the power series $f(x) = \sum_{n=0}^{\infty} a_n x^n$, then the convergence of power series at $x = \pm R$, depends on the -------.

Select the correct option

- nature of $\sum_{n=0}^{\infty} x^n$
- length of interval of convergence
- nature of sequence $\{a_n\}_{n \in N}$
- continuity of $f(x)$

6:47 95%

Quiz
quiz.vu.edu.pk

BC180203132: MUHAMMAD KHALIL

Time Left 88 sec(s)

MTH631:quiz 1

Quiz Start Time: 06:34 PM, 01 June 2021

Question # 9 of 10 (Start time: 06:47:12 PM, 01 June 2021)

Total Marks: 1

The term by term differentiation of the series is $S(x) = \sum_{n=0}^{\infty}(-1)^n \frac{x^{2n+1}}{(2n+1)!}$

Select the correct option

Reload Math Equations

- $\sum_{n=0}^{\infty}(-1)\frac{x^{2n+1}}{(2n+1)!}$.
- $\sum_{n=0}^{\infty}\frac{x^{2n+1}}{(2n+1)!}$.
- $\sum_{n=0}^{\infty}(-1)^n\frac{x^{2n}}{(2n)!}$
- None of these.

Click to Save Answer & Move to Next Question

4G 4G 7:06 18.6 KB/s
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Question # 6 of 10 (Start time: 07:06:13 PM, 01 June 2021) Total Marks: 1

For the power series $f(x) = \sum_{n=0}^{\infty} a_n x^n$, the expression: $\int_{\alpha}^{\beta} f(x) = \sum_{n=0}^{\infty} \frac{a_n}{n+1}(\alpha^n - \beta^n)$ holds only if

Select the correct option

Reload Math Equations

- at the boundary
- at the equidistant from the boundary
- in the interior
- in the exterior

3G 4G 58% 8:28
quiz.vu.edu.pk/QuizQue

BC180201528: NIMRA ABBAS

Time Left 89 sec(s)

MTH631:quiz 1

Quiz Start Time: 08:26 PM, 01 June 2021

Question # 3 of 10 (Start time: 08:28:55 PM, 01 June 2021)

Total Marks: 1

If $(-R, R)$ is the interval of convergence of a power series $\sum_{n=0}^{\infty} a_n(x-x_0)^n$, then which of the following is true?

Select the correct option

Reload Math Equations

- $x = \pm R$ are the points of divergence
- one of $x = R$ and $x = -R$ is a point of convergence and other is point of divergence
- $x = \pm R$ are the points of convergence
- All above statements are true

Click to Save Answer & Move to Next Question

LMS LMS

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BC180201528: NIMRA ABBAS

Time Left 89 sec(s)

MTH631:quiz 1

Quiz Start Time: 08:26 PM, 01 June 2021

Question # 5 of 10 (Start time: 08:30:11 PM, 01 June 2021)

Total Marks: 1

For a power series, if the radius of convergence is $R = 0$, then power series is said to:

Select the correct option

Reload Math Equations

- converge everwhere in the given domain
- converge nowhere(converge at single point)

Click to Save Answer & Move to Next Question

3G 4G 58% 8:31
quiz.vu.edu.pk/QuizQues

BC180201528: NIMRA ABBAS

Time Left 88 sec(s)

MTH631:quiz 1

Quiz Start Time: 08:26 PM, 01 June 2021

Question # 7 of 10 (Start time: 08:31:19 PM, 01 June 2021)

Total Marks: 1

The infinite series expansion of $\cos x$ for $-\infty < x < \infty$ is given by

Select the correct option

Reload Math Equations

- $\sum_{n=0}^{\infty}(-1)^n \frac{x^{2n}}{2n!}.$
- None of these
- $\sum_{n=0}^{\infty}(-1)^n \frac{x^n}{n!}.$
- $\sum_{n=0}^{\infty}(-1)^n \frac{x^{2n}}{(n+1)!}.$

Click to Save Answer & Move to Next Question

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BC180201528: NIMRA ABBAS

Time Left 89 sec(s)

MTH631:quiz 1

Quiz Start Time: 08:26 PM, 01 June 2021

Question # 10 of 10 (Start time: 08:32:52 PM, 01 June 2021)

Total Marks: 1

For a power series, if the radius of convergence is $R = \infty$, then power series is said to:

Select the correct option

Reload Math Equations

- converge nowhere (converge at single point)
- converge everwhere in the given domain

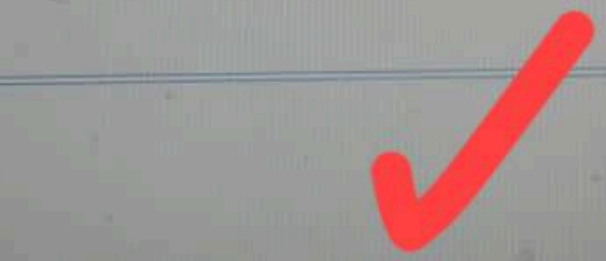
Not sure

Click to Save Answer & Move to Next Question

The radius of convergence of the power series $\sum_{n=1}^{\infty} a_n(x - x_0)^n$ is

Select the correct option

○	$\frac{1}{R} = \lim_{n\to\infty}\left\lvert\frac{a_n}{a_{n+1}}\right\rvert$
○	None of these
○	$\frac{1}{R} = \lim_{n\to\infty}\left\lvert\frac{a_{n+1}}{a_n}\right\rvert$
○	$R = \lim_{n\to\infty}\left\lvert\frac{a_{n+1}}{a_n}\right\rvert$



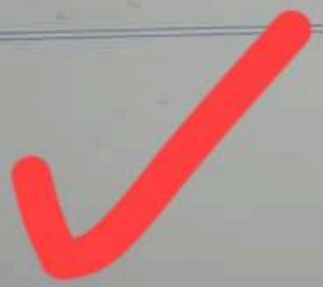
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Question # 2 of 10 (Start time: 07:45:53 PM, 01 June 2021)

The Taylor series of an infinitely many differentiable function " f(x) " ——— converges to " f(x)"

Select the correct option

- always
- not necessarily



Type here to search

Question # 3 of 10 (Start time: 07:46:48 PM, 01 June 2021)

Let f be defined by a power series with finite radius of convergence R. Then $\lim_{x \to (x_0 \pm R)^{\mp}} f(x) = \sum_{n=0}^{\infty} a_n R^n$ only if

Select the correct option

Reload Math Equa

- $\sum_{n=0}^{\infty} a_n R^n$ converges
- None of the above
- $\sum_{n=0}^{\infty} b_n R^n$ is convergent
- $\sum_{n=0}^{\infty} (-1)^n a_n R^n$ converges

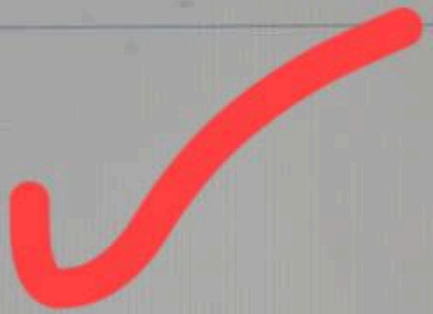
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Question # 6 of 10 (Start time: 07:49:24 PM, 01 June 2021)

If the two power series $\sum_{n=0}^{\infty} c_n x^n$ and $\sum_{n=0}^{\infty} d_n x^n$ defined on the same intervel of convergence say $(-r, r)$, $r > 0$ such that, $\sum_{n=0}^{\infty} c_n x^n = \sum_{n=0}^{\infty} d_n x^n$, then - - - - - - - ,where $n \geq 0$.

Select the correct option

○	necessarily $c_n = d_n$
○	may be $c_n \neq d_n$



Type here to search

4G 40% 8:43 pm

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13

BC180400508: MAZHAR IQBAL

Time Left 88 sec(s)

MTH631:quiz 1

Quiz Start Time: 08:43 PM, 01 June 2021

Question # 1 of 10 (Start time: 08:43:15 PM, 01 June 2021)

Total Marks: 1

The linear term of Taylor' series of $f(x) = \sin x$ about $x = 0$ is ;

Select the correct option

Reload Math Equations

- -x
- 1
- x
- -1



Click to Save Answer & Move to Next Question

3:38

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BC180204824: ZAHERIA HABIB

Time Left 89 sec(s)

MTH631:quiz 1

Quiz Start Time: 03:35 PM, 01 June 2021

Question # 5 of 10 (Start time: 03:38:57 PM, 01 June 2021)

Total Marks: 1

The limit of a uniformly convergent series of integrable functions is always

Select the correct option

Reload Math Equations

- integrable
- None of these
- not integrable
- differentiable

Click to Save Answer & Move to Next Question

3:38

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BC180204824: ZAHERIA HABIB

Time Left 88 sec(s)

MTH631:quiz 1

Quiz Start Time: 03:35 PM, 01 June 2021

Question # 4 of 10 (Start time: 03:38:21 PM, 01 June 2021)

Total Marks: 1

In the definition of uniform convergence the natural number N always depends on

Select the correct option

Reload Math Equations

○	β
○	η
○	ε (epsilon)
○	None of these

Click to Save Answer & Move to Next Question

3:37

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BC180204824: ZAHERIA HABIB

Time Left 87 sec(s)

MTH631:quiz 1

Quiz Start Time: 03:35 PM, 01 June 2021

Question # 3 of 10 (Start time: 03:37:40 PM, 01 June 2021)

Total Marks: 1

For the power series: $f(x) = \sum_{n=0}^{\infty} c_n x^n, x \in \mathbb{R}$, the $c_n = - - -$.

Select the correct option

Reload Math Equations

- $\frac{f^{(n)}(0)}{n!}$
- $\frac{f^{(n)}(1)}{n!}$

Click to Save Answer & Move to Next Question

3:35

quiz.vu.edu.pk/QuizQue

BC180204824: ZAHERIA HABIB

Time Left 88 sec(s)

MTH631:quiz 1

Quiz Start Time: 03:35 PM, 01 June 2021

Question # 1 of 10 (Start time: 03:35:36 PM, 01 June 2021)

Total Marks: 1

Let f be defined by a power series with finite radius of convergence R. Then $\lim_{x\to(x_0+R)^-} f(x) = \sum_{n=0}^{\infty} a_n R^n$ only if

Select the correct option

Reload Math Equations

- $\sum_{n=0}^{\infty} a_n R^n$ converges
- $\sum_{n=0}^{\infty} b_n R^n$ is uniformly convergent.
- None of these.
- $\sum_{n=0}^{\infty} (-1)^n a_n R^n$ converges.

Click to Save Answer & Move to Next Question