MC170201745: Shakeel Ahmad

Time Left 49 sec(s)

MTH631:Quiz-2

Quiz Start Time: 04:51 PM, 30 July 2018

Question # 4 of 10 (Start time: 04:53:47 PM, 30 July 2018) Total Marks: 1

. a point

$$\mathbf{X}_0$$

is local extreme point if

Select the correct option

Reload Math Equations

- for all $\mathbf{X} \in D_f$.
- partial derivatives exists and equal to zero.
- (●) does not change sign in $S_\delta(\mathbf{X}_0) \cap D_f$.
- None of these

Click to Save Answer & Move to Next Question

MC170201745: Shakeel Ahmad

Time Left 73 sec(s)

MTH631:Quiz-2

Quiz Start Time: 04:51 PM, 30 July 2018

Question # 8 of 10 (Start time: 04:56:40 PM, 30 July 2018)

Total Marks: 1

$$f(x,y)$$

as

$$(x,y) \to (0,0)$$

Select the correct option

Reload Math Equations

- ○ $\frac{1}{2}$
- ● $-\frac{1}{2}$
- ○ 0
- ○ 1

Click to Save Answer & Move to Next Question

MC170201745: Shakeel Ahmad

Time Left 40 sec(s)

MTH631:Quiz-2

Quiz Start Time: 04:51 PM, 30 July 2018

Question # 3 of 10 (Start time: 04:52:52 PM, 30 July 2018) **Total Marks: 1**

Identify the true statement(s)

Select the correct option

Reload Math Equations

- the function $f(x,y)=x^3+y^3$ has a local extreme point at origin.
- If $f_{x_i}(\mathbf{X}_0)=0$ then
- At every point where $f_{x_i}(\mathbf{X}_0)=0$ function has local extreme point.
- None of these

Click to Save Answer & Move to Next Question

Question # 9 of 10 (Start time: 06:48:56 PM, 31 July 2018)

Which statement(s) is(are) true about the function

$$f(x,y)=\frac{x^2+y^2}{x-y}$$

Select the correct option

○	$f_x(x,y)=\frac{2x}{x-y}-\frac{x^2+y^2}{(x+y)^2}$
○	$f_y(x,y)=\frac{y}{x-y}+\frac{x^2+y^2}{(x-y)^2}$.
○	$f_y(x,y),\ f_x(x,y)$ are continuous everywhere.
○	f is differentiable every where except at the points where

For the function

$$f(x,y)=\frac{xy}{x^2+y^2},$$

Select the correct option

○	$\frac{1}{2}$
○	$-\frac{1}{2}$
○	0
○	1

MC170201745: Shakeel Ahmad

Time Left 74 sec(s)

MTH631:Quiz-2

Quiz Start Time: 04:51 PM, 30 July 2018

Question # 5 of 10 (Start time: 04:54:32 PM, 30 July 2018) Total Marks: 1

$$df =$$

Select the correct option

Reload Math Equations

- [ ] 9
- [x] 9dx
- [ ] -1
- [ ] None of these

Click to Save Answer & Move to Next Question

M. 31 July 2018)

A critical point at which a function attains its maximum value among all points where it is defined is called _____

Select the correct option

○	global minimum
○	infimum
○	global maximum
○	None of these

Question # 5 of 10 (Start time: 06:44:50 PM, 31 July 2018)

For the functions $f(x) = 3x^2 + 5x^3$, the differential at x = - 1 exists because

Select the correct option

○	$\lim_{x \to -1} \frac{f(x)}{x+1} = \infty.$
○	$\lim_{x \to -1} \frac{9(x+1)}{x+1} = 0.$
○	$\lim_{x \to -1} \frac{f(x) + 2 - 9(x+1)}{x+1} = 0.$
○	$\lim_{x \to -1} \frac{f(x) + 2 - 9(x+1)}{x+1} = 1.$

Question # 8 of 10 (Start time: 06:47:23 PM, 31 July 2018)

Identify the false statement(s)

Select the correct option

○	The partial derivative is a special case of directional derivative.
○	For a functions of n variables $f(\mathbf{X})$ the partial derivative with respect to variable
○	The partial derivative of the function $f(x, y, z) = 3xyz + 2x^2 + z^2$ with respect to third variable is
○	None of these

MC170201745: Shakeel Ahmad

Time Left 66 sec(s)

MTH631:Quiz-2

Quiz Start Time: 04:51 PM, 30 July 2018

Question # 2 of 10 (Start time: 04:51:15 PM, 30 July 2018) **Total Marks: 1**

A set $A \subset R$ of real numbers is ----------if there exists a real number $m \in R$, such that $x \geq m$ for every $x \in A$.

Select the correct option

- bounded below
- uniformly continuous
- bounded above
- None of these

Click to Save Answer & Move to Next Question

MC170202886: Aqsa Zunaira

Time Left 41 sec(s)

MTH631:Quiz-2

Quiz Start Time: 03:53 PM, 30 July 2018

Question # 9 of 10 (Start time: 04:01:11 PM, 30 July 2018) Total Marks: 1

along the line

$$y = -x$$

is

Select the correct option

Reload Math Equations

- $\frac{1}{2}$
- $-\frac{1}{2}$
- 0
- 1

Click to Save Answer & Move to Next Question

MC170202886: Aqsa Zunaira

Time Left 75 sec(s)

MTH631:Quiz-2

Quiz Start Time: 03:53 PM, 30 July 2018

Question # 8 of 10 (Start time: 04:00:51 PM, 30 July 2018) **Total Marks: 1**

A sufficient condition for a function of several variables to be differentiable at point is

Select the correct option

Reload Math Equations

- only the partial derivative should exists at that point.
- All partial derivatives exists and are continuous at that point
- only limit at that point should exists.
- None of these

Click to Save Answer & Move to Next Question

MC170202886: Aqsa Zunaira

Time Left 43 sec(s)

MTH631:Quiz-2

Quiz Start Time: 03:53 PM, 30 July 2018

Question # 7 of 10 (Start time: 03:59:57 PM, 30 July 2018) **Total Marks: 1**

Identify the false statement(s)

Select the correct option

Reload Math Equations

- The partial derivative is a special case of directional derivative.
- $\frac{\partial f(\mathbf{X})}{\partial \mathbf{E}_2}$.
- with respect to third variable is $f_z = 2z$
- None of these

Click to Save Answer & Move to Next Question

MC170202886: Aqsa Zunaira

Time Left 31 sec(s)

MTH631:Quiz-2

Quiz Start Time: 03:53 PM, 30 July 2018

Question # 1 of 10 (Start time: 03:53:17 PM, 30 July 2018) Total Marks: 1

and

$$f_{yx}(x_0, y_0)$$

exists. Then,

Select the correct option

Reload Math Equations

- ● $f_{yx}(x_0, y_0) = f_{xy}(x_0, y_0)$
- ○ $f_{xx}(x_0, y_0) = f_{yy}(x_0, y_0)$
- ○ $f_x(x_0, y_0) = f_y(x_0, y_0)$
- ○ None of these

Click to Save Answer & Move to Next Question

MC170202886: Aqsa Zunaira

Time Left 58 sec(s)

MTH631:Quiz-2

Quiz Start Time: 03:53 PM, 30 July 2018

Question # 3 of 10 (Start time: 03:55:28 PM, 30 July 2018) **Total Marks: 1**

A critical point at which a function attains its maximum value among all points where it is defined is called .....

Select the correct option

- global minimum
- infimum
- global maximum
- None of these

Click to Save Answer & Move to Next Question

MC170202886: Aqsa Zunaira

Time Left 31 sec(s)

MTH631:Quiz-2

Quiz Start Time: 03:53 PM, 30 July 2018

Question # 4 of 10 (Start time: 03:56:48 PM, 30 July 2018) **Total Marks: 1**

Which expression represents the differential of a function of n variables at the point X0 ?

Select the correct option

Reload Math Equations

- $L(X) = f_{x_1}(X_0) + f_{x_2}(X_0) + \ldots + f_{x_n}(X_0)$
- $L(X) = f(X_0)x_1 + f(X_0)x_2 + \ldots + f(X_0)x_n$
- $L(X) = f_{x_1}(X_0)x_1 + f_{x_2}(X_0)x_2 + \ldots + f_{x_n}(X_0)x_n$
- None of these

Click to Save Answer & Move to Next Question

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MC170201745: Shakeel Ahmad

Time Left 82 sec(s)

MTH631:Quiz-2

Quiz Start Time: 04:51 PM, 30 July 2018

Question # 1 of 10 (Start time: 04:51:01 PM, 30 July 2018) **Total Marks: 1**

A point on the graph of a function at which the tangent line is parallel to x-axis is called the .....

Select the correct option

- (●) critical point
- ( ) point of inflection
- ( ) point of relative extrema
- ( ) None of these

Click to Save Answer & Move to Next Question

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Type here to search

4:51 PM
7/30/2018

MC170202886: Aqsa Zunaira

Time Left 19 sec(s)

MTH631:Quiz-2

Quiz Start Time: 03:53 PM, 30 July 2018

Question # 5 of 10 (Start time: 03:57:57 PM, 30 July 2018) **Total Marks: 1**

Which statement(s) is(are) true about the function

$$f(x,y)=\frac{x^2+y^2}{x-y}$$

Select the correct option

Reload Math Equations

- $f_x(x,y)=\frac{2x}{x-y}-\frac{x^2+y^2}{(x+y)^2}$
- $f_y(x,y)=\frac{y}{x-y}+\frac{x^2+y^2}{(x-y)^2}.$
- $f_y(x,y),\ f_x(x,y)$ are continuous everywhere.
- is differentiable every where except at the points where $y=x$

Click to Save Answer & Move to Next Question

Select the correct option

- the function $f(x, y) = x^3 + y^3$ has a local extreme point at origin.
- may or may not has a local extreme point at f $\mathbf{X}_0$
- At every point where $f_{x_i}(\mathbf{X}_0) = 0$ function has local extreme point.
- None of these

If

is continuous at $f(x, y)$

Select the correct option

○	$f_{yx}(x_0, y_0) = f_{xy}(x_0, y_0)$
○	$f_{xx}(x_0, y_0) = f_{yy}(x_0, y_0)$
○	$f_x(x_0, y_0) = f_y(x_0, y_0)$
○	None of these

MC170201745: Shakeel Ahmad

Time Left 76 sec(s)

MTH631:Quiz-2

Quiz Start Time: 04:51 PM, 30 July 2018

Question # 10 of 10 (Start time: 04:57:08 PM, 30 July 2018) **Total Marks: 1**

A tangent plane to the surface

$$z = f(x, y)$$

is always the limit of the ----------

Select the correct option

Reload Math Equations

- (●) secant plane
- ( ) tangent line
- ( ) normal plane
- ( ) None of these

Click to Save Answer & Move to Next Question

For a function of several variables ,

$f(\mathbf{X})$

, a point

Select the correct option

○	for all $f(\mathbf{X}) - f(\mathbf{X}_0)$ $\mathbf{X} \in D$
○	partial derivatives exists and equal to zero.
○	If $f(\mathbf{X}) - f(\mathbf{X}_0)$ does not change sign in
○	None of these

MC170201745: Shakeel Ahmad

Time Left 74 sec(s)

MTH631:Quiz-2

Quiz Start Time: 04:51 PM, 30 July 2018

Question # 7 of 10 (Start time: 04:56:19 PM, 30 July 2018) Total Marks: 1

and

$$f_{yx}(x_0, y_0)$$

exists. Then,

Select the correct option

Reload Math Equations

- ● $f_{yx}(x_0, y_0) = f_{xy}(x_0, y_0)$
- ○ $f_{xx}(x_0, y_0) = f_{yy}(x_0, y_0)$
- ○ $f_x(x_0, y_0) = f_y(x_0, y_0)$
- ○ None of these

Click to Save Answer & Move to Next Question

Question # 3 of 10 (Start time: 06:43:31 PM, 31 July 2018)

A tangent plane to the surface

$$z = f(x, y)$$

is always the limit of the ----------

Select the correct option

○	secant plane
○	tangent line
○	normal plane
○	None of these

A sufficient condition for a function of several variables to be differentiable at point is

Select the correct option

○	only the partial derivative should exists at that point
○	All partial derivatives exists and are continuous at that point
○	only limit at that point should exists
○	None of these

ct the correct option

the function $f(x,y)=x^2+y^2$ has a local extreme point at origin.
then $f_{x_1}(X_0)=0$ f
At every point where $f_{x_1}(X_0)=0$ function has local extreme point.
None of these

Question # 10 of 10 (Start time: 06:49:35 PM, 31 July 2018)

Identify the true statement(s)

Select the correct option

○	the function $f(x,y)=x^3+y^3$ has a local extreme point at origin.
○	If $f_x(\mathbf{X}_0)=0$ then
○	At every point where $f_x(\mathbf{X}_0)=0$ function has local extreme point
○	None of these

MC170201745: Shakeel Ahmad

Time Left 27 sec(s)

MTH631:Quiz-2

Quiz Start Time: 04:51 PM, 30 July 2018

Question # 6 of 10 (Start time: 04:54:54 PM, 30 July 2018) Total Marks: 1

For the function

$$f(x,y) = 3x^2y^3 + xy$$

in two variables.

Select the correct option

Reload Math Equations

- [ ] 0
- [ ] -1
- [x] 1
- [ ] None of these

Click to Save Answer & Move to Next Question

MC170203385: Maffia Bibi

Time Left 83 sec(s)

MTH631:Quiz-1

Quiz Start Time: 03:04 PM, 31 May 2018

Question # 10 of 10 (Start time: 03:07:17 PM, 31 May 2018) **Total Marks: 1**

If we have

$$f(x)=\sum_{n=0}^{\infty} a_n(x-x_0)^n, \quad |x-x_0|<R,$$

Select the correct option

Reload Math Equations

- $a_n=\frac{f^{(n)}(0)}{n!}.$
- $a_n=\frac{f^{(2n)}(x_0)}{n!}.$
- $a_n=\frac{f(nx_0)}{n!}.$
- (●) $a_n=\frac{f^{(n)}(x_0)}{n!}.$

Click to Save Answer & Move to Next Question

Question # 7 of 10 (Start time: 08:07:04 PM, 01 June 2018)

The values of x in a specific interval for which a given power series converges is called

Select the correct option

○	Interval of continuity
○	ineterval of convergence
○	radius of convergence
○	None of these

Question # 8 of 10 (Start time: 08:07:35 PM, 01 June 2018)

If we have

$$f(x)=\sum_{n=0}^{\infty} a_n(x-x_0)^n, \quad |x-x_0|<R,$$

Select the correct option

○	$a_n=\frac{f^{(n)}(0)}{n!}.$
○	$a_n=\frac{f^{(2n)}(x_0)}{n!}.$
○	$a_n=\frac{f(nx_0)}{n!}.$
○	$a_n=\frac{f^{(n)}(x_0)}{n!}.$

Question # 10 of 10 (Start time: 08:08:38 PM, 01 June 2018)

If $f(x) = \sin x$, then

Select the correct option

○	$f^{2m+1}(0) = 1, m \geq 0$
○	$f^{2m}(0) = 1$
○	$f''(x) = \sin x$
○	$\|f^{(k)}\|_{(-\infty,\infty)} = 1,\ k > 0$

MC170203385: Maffia Bibi

Time Left 84 sec(s)

MTH631:Quiz-1

Quiz Start Time: 03:04 PM, 31 May 2018

Question # 1 of 10 (Start time: 03:04:50 PM, 31 May 2018) **Total Marks: 1**

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

Select the correct option

Reload Math Equations

- not integrable
- differentiable
- integrable
- None of these

Click to Save Answer & Move to Next Question

MC170201823: Abid Farooq

Time Left 83 sec(s)

MTH631:Quiz-1

Quiz Start Time: 03:19 PM, 31 May 2018

Question # 3 of 10 (Start time: 03:20:46 PM, 31 May 2018)

Total Marks: 1

If we have

$$f(x)=\sum_{n=0}^{\infty} a_n(x-x_0)^n, \quad |x-x_0|<R,$$

Select the correct option

Reload Math Equations

- $a_n=\frac{f^{(n)}(0)}{n!}.$
- $a_n=\frac{f^{(2n)}(x_0)}{n!}.$
- $a_n=\frac{f(nx_0)}{n!}.$
- $a_n=\frac{f^{(n)}(x_0)}{n!}.$

Click to Save Answer & Move to Next Question

MC170203385: Maffia Bibi

Time Left 82 sec(s)

MTH631:Quiz-1

Quiz Start Time: 03:04 PM, 31 May 2018

Question # 6 of 10 (Start time: 03:06:15 PM, 31 May 2018) Total Marks: 1

If a series converges absolutely uniformly on S, then

Select the correct option

- (●) it converges uniformly on S
- ( ) it diverges
- ( ) it is differentiable on S
- ( ) None of these

Click to Save Answer & Move to Next Question

If a series converges absolutely uniformly on S, then

Select the correct option

- it converges uniformly on S
- it diverges
- it is differentiable on S
- None of these

Question # 3 of 10 (Start time: 08:04:27 PM, 01 June 2018)

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

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

MC170203385: Maffia Bibi

Time Left 85 sec(s)

MTH631:Quiz-1

Quiz Start Time: 03:04 PM, 31 May 2018

Question # 2 of 10 (Start time: 03:05:01 PM, 31 May 2018) Total Marks: 1

If $f(x) = \sin x$, then

Select the correct option

Reload Math Equations

- $f^{2m+1}(0) = 1, m \geq 0$
- $f^{2m}(0) = 1$
- $f''(x) = \sin x$
- $\|f^{(k)}\|_{(-\infty,\infty)} = 1,\ k \geq 0$

Click to Save Answer & Move to Next Question

MC170201823: Abid Farooq

Time Left 82 sec(s)

MTH631:Quiz-1

Quiz Start Time: 03:19 PM, 31 May 2018

Question # 2 of 10 (Start time: 03:20:33 PM, 31 May 2018) **Total Marks: 1**

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

Select the correct option

Reload Math Equations

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

Click to Save Answer & Move to Next Question

MC170203385: Maffia Bibi

Time Left 83 sec(s)

MTH631:Quiz-1

Quiz Start Time: 03:04 PM, 31 May 2018

Question # 8 of 10 (Start time: 03:06:56 PM, 31 May 2018) Total Marks: 1

Fourier series expansion of a function is a representation of the function as a linear combination of

Select the correct option

- ○ sines and tangents.
- ○ cosines and tangents.
- ○ tangents and cotangents.
- ● sines and cosines.

Click to Save Answer & Move to Next Question

MC170203385: Maffia Bibi

Time Left 79 sec(s)

MTH631:Quiz-1

Quiz Start Time: 03:04 PM, 31 May 2018

Question # 4 of 10 (Start time: 03:05:24 PM, 31 May 2018) **Total Marks: 1**

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

Select the correct option

Reload Math Equations

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

Click to Save Answer & Move to Next Question

MC170201823: Abid Farooq

Time Left 58 sec(s)

MTH631:Quiz-1

Quiz Start Time: 03:19 PM, 31 May 2018

Question # 7 of 10 (Start time: 03:21:28 PM, 31 May 2018) **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

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

Click to Save Answer & Move to Next Question

MC170201823: Abid Farooq

Time Left 78 sec(s)

MTH631:Quiz-1

Quiz Start Time: 03:19 PM, 31 May 2018

Question # 10 of 10 (Start time: 03:22:52 PM, 31 May 2018) **Total Marks: 1**

The power series expansion of $f(x) = \sin x$ about $x_0 = 0$ is

Select the correct option

Reload Math Equations

- $\sum_{n=0}^{\infty} \frac{x^{2n}}{(2n)!}, \quad -\infty < x < \infty,$
- $\sin x = \sum_{n=0}^{\infty} (-1)^n \frac{x^{2n}}{(2n)!}, \quad -\infty < x < \infty.$
- $\sum_{n=0}^{\infty} (-1)^n \frac{x^{2n+1}}{(2n+1)!}, \quad -\infty < x < \infty,$
- $\sum_{n=0}^{\infty} \frac{x^{2n+1}}{(2n+1)!}, \quad -\infty < x < \infty.$

Click to Save Answer & Move to Next Question

MC170201823: Abid Farooq

Time Left 82 sec(s)

MTH631:Quiz-1

Quiz Start Time: 03:19 PM, 31 May 2018

Question # 4 of 10 (Start time: 03:20:57 PM, 31 May 2018) Total Marks: 1

Fourier series expansion of a function is a representation of the function as a linear combination of

Select the correct option

- ○ sines and tangents.
- ○ cosines and tangents.
- ○ tangents and cotangents.
- ● sines and cosines.

Click to Save Answer & Move to Next Question

Question # 1 of 10 (Start time: 08:02:38 PM, 01 June 2018)

The limit of a uniformly convergent series of integrable functi... always

Select the correct option

○	not integrable
○	differentiable
○	integrable
○	None of these

MC170201823: Abid Farooq

Time Left 42 sec(s)

MTH631:Quiz-1

Quiz Start Time: 03:19 PM, 31 May 2018

Question # 1 of 10 (Start time: 03:19:30 PM, 31 May 2018) **Total Marks: 1**

The term by term differentiation of the series

$$\sum_{n=0}^{\infty}(-1)^n\frac{x^{2n}}{(2n)!}, \quad -\infty < x < \infty$$

Select the correct option

Reload Math Equations

- $\sum_{n=0}^{\infty}\frac{x^{2n}}{(2n)!}, \quad -\infty < x < \infty.$
- $\sum_{n=0}^{\infty}(-1)^n\frac{x^{2n}}{(2n)!}, \quad -\infty < x < \infty.$
- $\sum_{n=0}^{\infty}(-1)^n\frac{x^{2n+1}}{(2n+1)!}, \quad -\infty < x < \infty$
- $\sum_{n=20}^{\infty}(-1)^n\frac{x^{2n+1}}{(2n+1)!}, \quad -\infty < x < \infty.$

Click to Save Answer & Move to Next Question

MC170203385: Maffia Bibi

Time Left 81 sec(s)

MTH631:Quiz-1

Quiz Start Time: 03:04 PM, 31 May 2018

Question # 3 of 10 (Start time: 03:05:10 PM, 31 May 2018) **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

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

Click to Save Answer & Move to Next Question

Question # 5 of 10 (Start time: 08:05:49 PM, 01 June 2018)

Which of these functions is not uniformly continuous on (0, 1)?

Select the correct option

- x^2
- $1/x^2$
- $\sin x$
- $\frac{\sin x}{x}$

MC170203385: Maffia Bibi

Time Left 65 sec(s)

MTH631:Quiz-1

Quiz Start Time: 03:04 PM, 31 May 2018

Question # 7 of 10 (Start time: 03:06:27 PM, 31 May 2018) **Total Marks: 1**

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

Select the correct option

Reload Math Equations

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

Click to Save Answer & Move to Next Question

MC170201823: Abid Farooq

Time Left 82 sec(s)

MTH631:Quiz-1

Quiz Start Time: 03:19 PM, 31 May 2018

Question # 8 of 10 (Start time: 03:22:21 PM, 31 May 2018) **Total Marks: 1**

Which of these functions is not uniformly continuous on (0, 1)?

Select the correct option

Reload Math Equations

○	x^2
●	$1/x^2$
○	$\sin x$
○	$\frac{\sin x}{x}$

Click to Save Answer & Move to Next Question

MC170203385: Maffia Bibi

Time Left 83 sec(s)

MTH631:Quiz-1

Quiz Start Time: 03:04 PM, 31 May 2018

Question # 9 of 10 (Start time: 03:07:07 PM, 31 May 2018) **Total Marks: 1**

The values of x in a specific interval for which a given power series converges is called

Select the correct option

Reload Math Equations

○	Interval of continuity
●	ineterval of convergence
○	radius of convergence
○	None of these

Click to Save Answer & Move to Next Question

The term by term differentiation of the series

$$\sum_{n=0}^{\infty}(-1)^n\frac{x^{2n}}{(2n)!}, \quad -\infty < x < \infty$$

Select the correct option

○	$\sum_{n=0}^{\infty}\frac{x^{2n}}{(2n)!}, \quad -\infty < x < \infty.$
○	$\sum_{n=0}^{\infty}(-1)^n\frac{x^{2n}}{(2n)!}, \quad -\infty < x < \infty.$
○	$\sum_{n=0}^{\infty}(-1)^n\frac{x^{2n+1}}{(2n+1)!}, \quad -\infty < x < \infty$
○	$\sum_{n=20}^{\infty}(-1)^n\frac{x^{2n+1}}{(2n+1)!}, \quad -\infty < x < \infty.$

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Time Left 84 sec(s)

MTH631:Quiz-1

Quiz Start Time: 03:19 PM, 31 May 2018

Question # 6 of 10 (Start time: 03:21:18 PM, 31 May 2018) **Total Marks: 1**

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

Select the correct option

Reload Math Equations

●	ε (epsilon)
○	η
○	β
○	None of these

Click to Save Answer & Move to Next Question

Question # 2 of 10 (Start time: 08:03:43 PM, 01 June 2018)

The power series expansion of $f(x) = \sin x$ about $x_0 = 0$ is

Select the correct option

○	$\sum_{n=0}^{\infty} \frac{x^{2n}}{(2n)!}, \quad -\infty < x < \infty,$
○	$\sin x = \sum_{n=0}^{\infty} (-1)^n \frac{x^{2n}}{(-n)!}, \quad -\infty < x < \infty$
○	$\sum_{n=0}^{\infty} (-1)^n \frac{x^{2n+1}}{(2n+1)!}, \quad -\infty < x < \infty,$
○	$\sum_{n=0}^{\infty} \frac{x^{2n+1}}{(2n+1)!}, \quad -\infty < x < \infty$

Question # 4 of 10 (Start time: 08:05:11 PM. 01 June 2018)

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

Select the correct option

○	ϵ (epsilon)
○	η
○	β
○	None of these

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Time Left 83 sec(s)

MTH631:Quiz-1

Quiz Start Time: 03:19 PM, 31 May 2018

Question # 5 of 10 (Start time: 03:21:08 PM, 31 May 2018) Total Marks: 1

If $f(x) = \sin x$, then

Select the correct option

Reload Math Equations

- $f^{2m+1}(0) = 1, m \geq 0$
- $f^{2m}(0) = 1$
- $f''(x) = \sin x$
- $\|f^{(k)}\|_{(-\infty,\infty)} = 1,\ k \geq 0$

Click to Save Answer & Move to Next Question