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MTH621:Quiz No 3 — Quiz Start Time: 12:59 AM, 17 February 2019

Question # 1 of 10 (Start time: 12:59:51 AM, 17 February 2019) — Total Marks: 1

The function $g(x) = x^2$ is

Select the correct option — Reload Math Equations

- decreasing on $[0, \infty)$.
- increasing on $[0, \infty)$. R
- having negative values on $[0, \infty)$.
- undefined on $[0, \infty)$.

MTH621:Quiz No 3 — Quiz Start Time: 12:59 AM, 17 February 2019

Question # 2 of 10 (Start time: 01:00:11 AM, 17 February 2019) — Total Marks: 1

If a function f is continuous on the closed interval then f attains its

Select the correct option — Reload Math Equations

- extreme values in the closed interval. R
- extreme values at one point in the closed interval.
- may or may not attain extreme values in the closed interval.
- derivative in the closed interval.

MTH621:Quiz No 3 — Quiz Start Time: 12:59 AM, 17 February 2019

Question # 3 of 10 (Start time: 01:01:30 AM, 17 February 2019) — Total Marks: 1

If $f : I \to \mathbb{R}$ has a derivative at $c \in I$, then f is

Select the correct option — Reload Math Equations

- continuous at c. R
- discontinuous at c.
- undefined at c.
- having one sided limit.

MTH621:Quiz No 3 — Quiz Start Time: 12:59 AM, 17 February 2019

Question # 4 of 10 (Start time: 01:01:38 AM, 17 February 2019) — Total Marks: 1

The function $h(x) = -x^3$ is

Select the correct option — Reload Math Equations

- is undefined on $(-\infty, \infty)$.
- decreasing on $(-\infty, \infty)$. R
- increasing on $(-\infty, \infty)$.
- positive on $(-\infty, \infty)$.

MTH621:Quiz No 3 — Quiz Start Time: 12:59 AM, 17 February 2019

Question # 5 of 10 (Start time: 01:02:05 AM, 17 February 2019) — Total Marks: 1

If f is differentiable at a local extreme point $x_0 \in D_f^0$, then

Select the correct option — Reload Math Equations

- $f'(x_0) \neq 0.$
- $f'(x_0) = 0.$ R
- $x_0 = 0.$
- $|f'(x_0)| < 0.$

MTH621:Quiz No 3 — Quiz Start Time: 12:59 AM, 17 February 2019

Question # 6 of 10 (Start time: 01:03:08 AM, 17 February 2019) — Total Marks: 1

The inverse of the function $f(x) = x^2$, is

Select the correct option — Reload Math Equations

- $f^{-1}(y) = y^2$
- $f^{-1}(y) = \sqrt{y}.$ R
- $f^{-1}(y) = \frac{1}{x^2}$
- $f^{-1}(y) = \frac{1}{y^2}$

MTH621:Quiz No 3 — Quiz Start Time: 12:59 AM, 17 February 2019

Question # 7 of 10 (Start time: 01:04:13 AM, 17 February 2019) — Total Marks: 1

$\lim_{x \to 0+} x \log x$, has the following indeterminate form

Select the correct option — Reload Math Equations

- $\infty \times \infty$.
- $(0)(\infty)$.
- $\frac{0}{0}$.
- 0^{∞}.

MTH621:Quiz No 3 — Quiz Start Time: 12:59 AM, 17 February 2019

Question # 8 of 10 (Start time: 01:04:21 AM, 17 February 2019) — Total Marks: 1

Rolle's Theorem says, suppose that f is continuous on the closed interval $[a, b]$ and differentiable on the open interval (a, b) and $f(a) = f(b)$.

Select the correct option — Reload Math Equations

- Then $f'(c) = 0$ for some c in the open interval (a, b).
- Then $f'(c) \neq 0$ for some c in the open interval (a, b).
- Then $f'(c)$ exists for some c in the open interval (a, b).
- Then $f'(c) = 0$ for some c in the open interval (a, ∞).

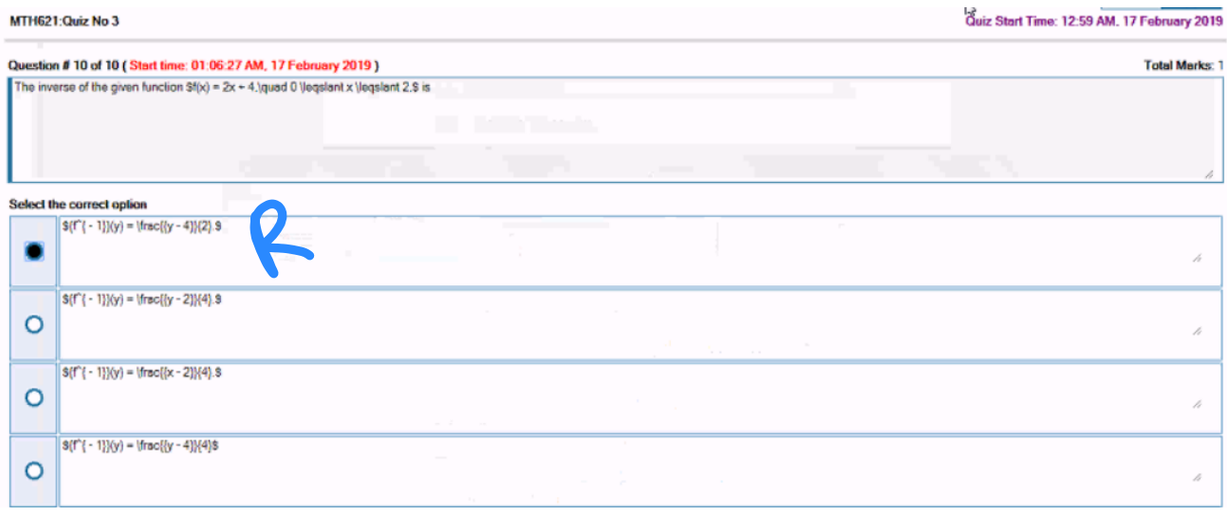
MTH621:Quiz No 3 — Quiz Start Time: 12:59 AM, 17 February 2019

Question # 9 of 10 (Start time: 01:05:10 AM, 17 February 2019) — Total Marks: 1

The Mean Value Theorem says, suppose that f is differentiable on $[a, b]$, $f'(a) \neq f'(b)$, and μ is between $f'(a)$ and $f'(b)$.

Select the correct option — Reload Math Equations

- Then $f'(c) \neq \mu$ for some c in (a, b).
- Then $f'(c) = \mu$ for some c in (a, b).
- Then $f'(c) = 0$ for some c in (a, b).
- Then $f'(c)$ may be 0 or μ for some c in (a, b).


MTH621:Quiz No 3

Quiz Start Time: 12:59 AM, 17 February 2019

Question # 10 of 10 (Start time: 01:06:27 AM, 17 February 2019)

Total Marks: 1

The inverse of the given function $f(x) = 2x + 4.\quad 0 \leqslant x \leqslant 2.$ is

Select the correct option

- $f^{ - 1}(y) = \frac{(y - 4)}{2}.$
- $f^{ - 1}(y) = \frac{(y - 2)}{4}.$
- $f^{ - 1}(y) = \frac{(x - 2)}{4}.$
- $f^{ - 1}(y) = \frac{(y - 4)}{4}$

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MTH621:Quiz 2

Question # 9 of 10 (Start time: 02:14:42 PM, 28 November 2017)

Every Cauchy sequence has a

Select the correct option

- convergent subsequence.
- increasing subsequence.
- decreasing subsequence.
- positive subsequence.

Question # 10 of 10 (Start time: 03:33:30 PM, 16 February 2019) Total Marks: 1

The function $f(x) = \begin{cases} x, & 0 \leq x < 1, \\ 2, & 1 \leq x \leq 2, \end{cases}$ is

Select the correct option

Reload Math Equations

- is nondecreasing on $I = [0, 2]$.
- is nonincreasing on $I = [0, 2]$.
- is having negative values on $I = [0, 2]$.
- is undefined on $I = [0, 2]$.

MC180200518: SHAZIA TABASSUM

Time Left 85 sec(s)

MTH621:Quiz No 3

Quiz Start Time: 03:26 PM, 16 February 2019

Question # 8 of 10 (Start time: 03:32:16 PM, 16 February 2019)

Total Marks: 1

The function $h(x) = -x^3$ is

Select the correct option

Reload Math Equations

- is undefined on $(-\infty, \infty)$.
- decreasing on $(-\infty, \infty)$.
- increasing on $(-\infty, \infty)$.
- positive on $(-\infty, \infty)$.

Question # 7 of 10 (Start time: 03:31:31 PM, 16 February 2019) **Total Marks: 1**

Generalized Mean Value Theorem says, If f and g are continuous on the closed interval $[a, b]$ and differentiable on the open interval (a, b), then

Select the correct option

Reload Math Equations

- $[g(b) - g(a)]f'(c) = [f(b) - f(a)]g'(c)$ for some c in (a, b).
- $[g(b) - g(a)] = [f(b) - f(a)]g'(c)$ for some c in (a, b).
- $g'(x) = 0$ for all x in (a, b).
- $g'(x) = f'(x)$ for all x in (a, b).

Question # 6 of 10 (Start time: 03:30:58 PM, 16 February 2019)

Total M

The function $g(x) = x^2$ is

Select the correct option

Reload Math Equ

- decreasing on $[0, \infty)$.
- increasing on $[0, \infty)$.
- having negative values on $[0, \infty)$.
- undefined on $[0, \infty)$.

Question # 5 of 10 (Start time: 03:30:23 PM, 16 February 2019) **Total Marks:** 1

The Mean Value Theorem says, suppose that f is differentiable on $[a, b]$, $f'(a) \neq f'(b)$, and μ is between $f'(a)$ and $f'(b)$.

Select the correct option

Reload Math Equations

- Then $f'(c) \neq \mu$ for some c in (a, b).
- Then $f'(c) = \mu$ for some c in (a, b).
- Then $f'(c) = 0$ for some c in (a, b).
- Then $f'(c)$ may be 0 or μ for some c in (a, b).

MTH621:Quiz No 3

Question # 2 of 10 (Start time: 03:28:07 PM, 16 February 2019)

If $f : I \to \mathbb{R}$ has a derivative at $c \in I$, then f is

Select the correct option

●	continuous at c.
○	discontinuous at c.
○	undefined at c.
○	having one sided limit.

Type text here

MTH621:Quiz No 3

Question # 4 of 10 (Start time: 03:29:43 PM, 16 February 2019)

The derivative of the function x^n is

Select the correct option

- x^{n-1}.
- $n.x^{n-1}$.
- $\frac{n}{x^{n-1}}$.
- $n.x^n$.

MC180200518: SHAZIA TABASSUM

Time Left 47 sec(s)

MTH621:Quiz No 3

Quiz Start Time: 03:26 PM, 16 February 2019

Question # 3 of 10 (Start time: 03:28:42 PM, 16 February 2019)

Total Marks: 1

If a function f is continuous on the closed interval then f attains its

Select the correct option

Reload Math Equations

- extreme values in the closed interval.
- extreme values at one point in the closed interval.
- may or may not attain extreme values in the closed interval.
- derivative in the closed interval.

MC180200518: SHAZIA TABASSUM

Time Left 80 sec(s)

MTH621:Quiz No 3

Quiz Start Time: 03:26 PM, 16 February 201

Question # 9 of 10 (Start time: 03:33:11 PM, 16 February 2019)

Total Marks:

$\lim_{x \to 0^+} x \log x$, has the following indeterminate form

Select the correct option

Reload Math Equations

- $\infty \times \infty$.
- $(0)(\infty)$.
- $\frac{0}{0}$.
- 0^{∞}.

IMPORTANT POINTS TO REVIEW BEFORE SOLVING MTH621-QUIZ#3----------BY MTA@17FEB2019

It is not useful to define $\infty-\infty$, $0\cdot\infty$, ∞/∞, and $0/0$. They are called indeterminate forms, and left unde_ned.

The function

$f(x) =$

{

$x,\ 0 \le x < 1,$

$2,\ 1 \le x \le 2,$

is nondecreasing on $I = [0, 2]$.

The function $g(x) = x2$ is increasing on $[0,\infty)$. The function $h(x) = -x3$ is decreasing on $(-\infty,\infty)$.

If f and g are continuous on the closed interval $[a, b]$ and di_erentiable on the open interval (a, b), then

$[g(b) - g(a)]f'(c) = [f(b) - f(a)]g'(c)$

The derivative of the function x^n is nx^{n-1}

Recall the following: If a function f is continuous on the closed interval then f attains its extreme values in the closed interval.

The inverse of the given function is $f^{-1}(y) = g(y) = \sqrt{y}, 0 < y < R^2$

Suppose that f is continuous on the closed interval $[a, b]$ and di_erentiable on the open interval (a, b), and $f(a) = f(b)$. Then $f'(c) = 0$ for some c in the open interval (a, b).

MC170201745: Shakeel Ahmad

Time Left 73 sec(s)

MTH621:Quiz 3 - Lecture 23 to 27

Quiz Start Time: 07:47 PM, 16 January 2018

Question # 9 of 10 (Start time: 07:54:42 PM, 16 January 2018) Total Marks: 1

The limit

$$\lim_{x \to 1} \sqrt{x} - 1.$$

Select the correct option

Reload Math Equations

- 1.
- 0.
- does not exist.
- -1.

Click to Save Answer & Move to Next Question

MC170201745: Shakool Ahmad

Time Left 31 sec(s)

MTH621:Quiz 2

Quiz Start Time: 02:06 PM, 28 November 2017

Question # 8 of 10 (Start time: 02:13:27 PM, 28 November 2017) Total Marks: 1

The set of terms of $\{s_{n_k}\}$ is contained in the set of terms of $\{s_n\}$ implies

Select the correct option

Reload Math Equations

- $\sup\{s_n\} = \sup\{s_{n_k}\}$.
- $\sup\{s_n\} \leq \sup\{s_{n_k}\}$.
- $\sup\{s_n\} \geq \sup\{s_{n_k}\}$. R
- $\{s_n\}$ is convergent.

MC170202886: Aqsa Zunaira

Time Left 62 sec(s)

MTH621:Quiz 4 -Lectures 30 to 37

Quiz Start Time: 10:03 PM, 06 February 2018

Question # 2 of 10 (Start time: 10:03:30 PM, 06 February 2018) Total Marks: 1

The Mean Value Theorem says, suppose that f is differentiable on $[a, b]$, $f'(a) \neq f'(b)$, and μ is between $f'(a)$ and $f'(b)$.

Select the correct option

Reload Math Equations

- Then $f'(c) \neq \mu$ for some c in (a, b).
- Then $f'(c) = \mu$ for some c in (a, b).
- Then $f'(c) = 0$ for some c in (a, b).
- Then $f'(c)$ may be 0 or μ for some c in (a, b).

Click to Save Answer & Move to Next Question

MC170201745: Shakeel Ahmad

Time Left 74 sec(s)

MTH621:Quiz 3 - Lecture 23 to 27

Quiz Start Time: 07:47 PM, 16 January 2018

Question # 1 of 10 (Start time: 07:47:22 PM, 16 January 2018) Total Marks: 1

The limit

$$\lim_{x \to \infty} x^2 - x.$$

is

Select the correct option

Reload Math Equations

- [x] does not exist.
- [ ] 2.
- [ ] 0.
- [ ] 6.

Click to Save Answer & Move to Next Question

MC170201745: Shakool Ahmad

Time Left 35 sec(s)

MTH621:Quiz 2

Quiz Start Time: 02:06 PM, 28 November 2017

Question # 1 of 10 (Start time: 02:06:09 PM, 28 November 2017) **Total Marks: 1**

Which statement(s) is(are) true about the following sequence $s_0 = 1$ and $s_n = 1 - e^{-s_{n-1}}$

Select the correct option

Reload Math Equations

- $0 < s_n \leq 1$ for all n.
- $s_{n+1} - s_n = -(e^{-s_n} - e^{-s_{n-1}})$.
- Sequence is convergent.
- All of the above.

MC170202886: Aqsa Zunaira

Time Left 55 sec(s)

MTH621:Quiz 4 -Lectures 30 to 37

Quiz Start Time: 10:03 PM, 06 February 2018

Question # 9 of 10 (Start time: 10:05:45 PM, 06 February 2018) Total Marks: 1

If $f : I \to \mathbb{R}$ has a derivative at $c \in I$, then f is

Select the correct option

Reload Math Equations

- (●) continuous at c.
- ( ) discontinuous at c.
- ( ) undefined at c.
- ( ) having one sided limit.

Click to Save Answer & Move to Next Question

MC170201745: Shakool Ahmad

Time Left 30 sec(s)

MTH621:Quiz 2

Quiz Start Time: 02:06 PM, 28 November 2017

Question # 7 of 10 (Start time: 02:12:09 PM, 28 November 2017) Total Marks: 1

The series $\sum_{n=0}^{\infty} r^n, \quad -1 < r < 1$, is

Select the correct option

Reload Math Equations

- (●) divergent.
- ( ) convergent and converges to $\frac{1}{1+r^2}$.
- ( ) convergent and converges to 5.
- ( ) convergent and converges to $\frac{1}{1-r}$.

MC170201745: Shakool Ahmad

Time Left 40 sec(s)

MTH621:Quiz 2

Quiz Start Time: 02:06 PM, 28 November 2017

Question # 2 of 10 (Start time: 02:07:17 PM, 28 November 2017) Total Marks: 1

If the sequence is increasing, then it

Select the correct option

- converges to its supremum.
- diverges.
- may converges to its supremum.
- is bounded.

MC170201745: Shakool Ahmad

Time Left 53 sec(s)

MTH621:Quiz 2

Quiz Start Time: 02:06 PM, 28 November 2017

Question # 4 of 10 (Start time: 02:09:40 PM, 28 November 2017) Total Marks: 1

Identify the identical sequences.

Select the correct option

Reload Math Equations

- $\left\{\frac{1}{n^2-2}\right\}_3^\infty$ and $\left\{\frac{1}{n}\right\}_1^\infty$.
- $\left\{\frac{1}{n}\right\}_3^\infty$ and $\left\{\frac{1}{n}\right\}_1^\infty$.
- $\left\{\frac{1}{n-2}\right\}_3^\infty$ and $\left\{\frac{1}{n^2}\right\}_1^\infty$.
- $\left\{\frac{1}{n-2}\right\}_3^\infty$ and $\left\{\frac{1}{n}\right\}_1^\infty$.

MC170201745: Shakeel Ahmad

Time Left 63 sec(s)

MTH621:Quiz 4 -Lectures 30 to 37

Quiz Start Time: 09:37 PM, 06 February 2018

Question # 10 of 10 (Start time: 09:42:41 PM, 06 February 2018) Total Marks: 1

$\lim_{x \to 0+} x \log x$, has the following indeterminate form

Select the correct option

Reload Math Equations

- $\infty \times \infty$.
- $(0)(\infty)$.
- $\frac{0}{0}$.
- 0^{∞}.

Click to Save Answer & Move to Next Question

MC170202886: Aqsa Zunaira

Time Left 70 sec(s)

MTH621:Quiz 4 -Lectures 30 to 37

Quiz Start Time: 10:03 PM, 06 February 2018

Question # 4 of 10 (Start time: 10:04:12 PM, 06 February 2018) Total Marks: 1

Rolle's Theorem says, suppose that f is continuous on the closed interval $[a, b]$ and differentiable on the open interval (a, b) and $f(a) = f(b)$.

Select the correct option

Reload Math Equations

- (●) Then $f'(c) = 0$ for some c in the open interval (a, b).
- ( ) Then $f'(c) \neq 0$ for some c in the open interval (a, b).
- ( ) Then $f'(c)$ exists for some c in the open interval (a, b).
- ( ) Then $f'(c) = 0$ for some c in the open interval (a, ∞).

Click to Save Answer & Move to Next Question

MC170202886: Aqsa Zunaira

Time Left 80 sec(s)

MTH621:Quiz 4 -Lectures 30 to 37

Quiz Start Time: 10:03 PM, 06 February 2018

Question # 5 of 10 (Start time: 10:04:36 PM, 06 February 2018) Total Marks: 1

Generalized Mean Value Theorem says. If f and g are continuous on the closed interval $[a, b]$ and differentiable on the open interval (a, b), then

Select the correct option

Reload Math Equations

- $[g(b) - g(a)]f'(c) = [f(b) - f(a)]g'(c)$ for some c in (a, b).
- $[g(b) - g(a)] = [f(b) - f(a)]g'(c)$ for some c in (a, b).
- $g'(x) = 0$ for all x in (a, b).
- $g'(x) = f'(x)$ for all x in (a, b).

Click to Save Answer & Move to Next Question

MC170202886: Aqsa Zunaira

Time Left 77 sec(s)

MTH621:Quiz 3 - Lecture 23 to 27

Quiz Start Time: 09:46 PM, 18 January 2018

Question # 5 of 10 (Start time: 09:47:26 PM, 18 January 2018) Total Marks: 1

For the function defined as $f(x) = cx$, for every $\epsilon > 0$ the formal definition of limit of function ensures

Select the correct option

Reload Math Equations

- $|f(x) - cx_0| < \epsilon, \quad |x - x_0| < \delta$, where $0 < \delta < \epsilon$.
- $|f(x) - cx_0| < \epsilon, \quad |x - x_0| < \delta$, where $0 < \delta < \epsilon/|c|$. (selected)
- $|f(x) - cx_0| < \epsilon, \quad |x - x_0| < \delta$, where $-\epsilon < \delta < \epsilon$.
- $|f(x) - c| < \epsilon, \quad |x - x_0| < \delta$, where $0 < \delta < \epsilon$.

Click to Save Answer & Move to Next Question

MC170200890: Awwal Khan

Time Left 82 sec(s)

MTH621:Quiz 4 -Lectures 30 to 37

Quiz Start Time: 10:31 PM, 06 February 2018

Question # 2 of 10 (Start time: 10:32:00 PM, 06 February 2018) Total Marks: 1

If $f : I \to \mathbb{R}$ has a derivative at $c \in I$, then f is

Select the correct option

Reload Math Equations

- [x] continuous at c.
- [ ] discontinuous at c.
- [ ] undefined at c.
- [ ] having one sided limit.

Click to Save Answer & Move to Next Question

MC170201745: Shakeel Ahmad

Time Left 27 sec(s)

MTH621:Quiz 3 - Lecture 23 to 27

Quiz Start Time: 07:47 PM, 16 January 2018

Question # 6 of 10 (Start time: 07:51:32 PM, 16 January 2018)

Total Marks: 1

The $\lim_{x \to 0} \frac{4 - 4\cos x - 2\sin^2 x}{x^4}$ is

Select the correct option

Reload Math Equations

- $\frac{1}{4}$.
- $-\frac{1}{2}$.
- $\frac{1}{2}$.
- 2.

Click to Save Answer & Move to Next Question

MC170202886: Aqsa Zunaira

Time Left 70 sec(s)

MTH621:Quiz 4 -Lectures 30 to 37

Quiz Start Time: 10:03 PM, 06 February 2018

Question # 10 of 10 (Start time: 10:06:24 PM, 06 February 2018) Total Marks: 1

The function $h(x) = -x^3$ is

Select the correct option

Reload Math Equations

- is undefined on $(-\infty, \infty)$.
- decreasing on $(-\infty, \infty)$.
- increasing on $(-\infty, \infty)$.
- positive on $(-\infty, \infty)$.

Click to Save Answer & Move to Next Question

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MC170201745: Shakeel Ahmad

Time Left 51 sec(s)

MTH621:Quiz 4 -Lectures 30 to 37

Quiz Start Time: 09:37 PM, 06 February 2018

Question # 8 of 10 (Start time: 09:41:16 PM, 06 February 2018) Total Marks: 1

The inverse of the given function $f(x) = 2x + 4,\quad 0 \leqslant x \leqslant 2,$ is

Select the correct option

- [x] $f^{-1}(y) = \frac{y - 4}{2}.$
- [ ] $f^{-1}(y) = \frac{y - 2}{4}.$
- [ ] $f^{-1}(y) = \frac{x - 2}{4}.$
- [ ] $f^{-1}(y) = \frac{y - 4}{4}$

Click to Save Answer & Move to Next Question

Type here to search

9:42 PM 2/6/2018

MC170201745: Shakeel Ahmad

Time Left 52 sec(s)

MTH621:Quiz 4 -Lectures 30 to 37

Quiz Start Time: 09:37 PM, 06 February 2018

Question # 7 of 10 (Start time: 09:40:26 PM, 06 February 2018) Total Marks: 1

The inverse of the function $f(x) = x^2$, is

Select the correct option

Reload Math Equations

- $f^{-1}(y) = y^2$
- $f^{-1}(y) = \sqrt{y}$.
- $f^{-1}(y) = \frac{1}{x^2}$
- $f^{-1}(y) = \frac{1}{y^2}$

Click to Save Answer & Move to Next Question

MC170201745: Shakool Ahmad

Time Left 54 sec(s)

MTH621:Quiz 2

Quiz Start Time: 02:06 PM, 28 November 2017

Question # 5 of 10 (Start time: 02:10:35 PM, 28 November 2017) Total Marks: 1

Which statement(s) is(are) true about the following sequence $s_0 = 1$ and $s_n = 1 - e^{-s_{n-1}}$

Select the correct option

Reload Math Equations

- $0 < s_n \leq 1$ for all n.
- $s_{n+1} - s_n = -(e^{-s_n} - e^{-s_{n-1}})$.
- Sequence is convergent.
- All of the above.

MC170202886: Aqsa Zunaira

Time Left 83 sec(s)

MTH621:Quiz 4 -Lectures 30 to 37

Quiz Start Time: 10:03 PM, 06 February 2018

Question # 3 of 10 (Start time: 10:04:02 PM, 06 February 2018) Total Marks: 1

The inverse of the function $f(x) = x^2$, is

Select the correct option

Reload Math Equations

- $f^{-1}(y) = y^2$
- $f^{-1}(y) = \sqrt{y}$.
- $f^{-1}(y) = \frac{1}{x^2}$
- $f^{-1}(y) = \frac{1}{y^2}$

Click to Save Answer & Move to Next Question

MC170201745: Shakeel Ahmad

Time Left 55 sec(s)

MTH621:Quiz 3 - Lecture 23 to 27

Quiz Start Time: 07:47 PM, 16 January 2018

Question # 6 of 10 (Start time: 07:51:32 PM, 16 January 2018)

Total Marks: 1

The $\lim_{x \to 0} \frac{4 - 4\cos x - 2\sin^2 x}{x^4}$ is

Select the correct option

Reload Math Equations

- $\frac{1}{4}$.
- $-\frac{1}{2}$.
- $\frac{1}{2}$.
- 2.

Click to Save Answer & Move to Next Question

MC170201745: Shakool Ahmad

Time Left 47 sec(s)

MTH621:Quiz 2

Quiz Start Time: 02:06 PM, 28 November 2017

Question # 3 of 10 (Start time: 02:08:24 PM, 28 November 2017) Total Marks: 1

Which of the following given sets is compact subset of $\mathbb{R}$.

Select the correct option

Reload Math Equations

- (1,5]
- {1,2,4}
- [0,1]
- (2,3)

MC170201745: Shakeel Ahmad

Time Left 42 sec(s)

MTH621:Quiz 3 - Lecture 23 to 27

Quiz Start Time: 07:47 PM, 16 January 2018

Question # 3 of 10 (Start time: 07:48:48 PM, 16 January 2018) Total Marks: 1

For the function $\frac{|x|}{x}$, identify the false statement(s)

Select the correct option

Reload Math Equations

- $\lim_{x \to 0^+} \frac{|x|}{x} = 1$
- $\lim_{x \to 0^-} \frac{|x|}{x} = -1$.
- $\lim_{x \to 0} \frac{|x|}{x}$ doesn't exist.
- $\lim_{x \to 0} \frac{|x|}{x} = 1$.

Click to Save Answer & Move to Next Question

MC170202886: Aqsa Zunaira

Time Left 81 sec(s)

MTH621:Quiz 3 - Lecture 23 to 27

Quiz Start Time: 09:46 PM, 18 January 2018

Question # 7 of 10 (Start time: 09:48:03 PM, 18 January 2018)

Total Marks: 1

The value of the limit

$$\lim_{x \to 0^+} x \log x,$$

Select the correct option

Reload Math Equations

- 0
- 1
- 2
- 3

Click to Save Answer & Move to Next Question

MC170202886: Aqsa Zunaira

Time Left 63 sec(s)

MTH621:Quiz 3 - Lecture 23 to 27

Quiz Start Time: 09:46 PM, 18 January 2018

Question # 9 of 10 (Start time: 09:48:57 PM, 18 January 2018) Total Marks: 1

For the function $f(x) = x \sin \frac{1}{x}, \quad x \neq 0$, which statement is true

Select the correct option

Reload Math Equations

- $\lim_{x \to 1/\pi} f(x) = 0.$
- The function is not defined at $x = 0.$
- $\lim_{x \to 0} f(x) = 1.$
- $\lim_{x \to 0} f(x) = 0.$

R

Click to Save Answer & Move to Next Question

MC170201745: Shakeel Ahmad

Time Left 50 sec(s)

MTH621:Quiz 3 - Lecture 23 to 27

Quiz Start Time: 07:47 PM, 16 January 2018

Question # 4 of 10 (Start time: 07:49:47 PM, 16 January 2018) Total Marks: 1

For the function

$$f(x) = x \sin \frac{1}{x}, \quad x \neq 0,$$

Select the correct option

Reload Math Equations

- $\lim_{x \to 1/\pi} f(x) = 0.$
- The function is not defined at $x = 0.$
- $\lim_{x \to 0} f(x) = 1.$
- $\lim_{x \to 0} f(x) = 0.$

Click to Save Answer & Move to Next Question

MC170202886: Aqsa Zunaira

Time Left 62 sec(s)

MTH621:Quiz 3 - Lecture 23 to 27

Quiz Start Time: 09:46 PM, 18 January 2018

Question # 8 of 10 (Start time: 09:48:22 PM, 18 January 2018) Total Marks: 1

For the piecewise defined function $f(x) = \left\{ {

$$\begin{aligned} x^3, &\quad x \leqslant 0, \\ x^2 \sin \tfrac{1}{x}, &\quad x > 0, \end{aligned}$$

Select the correct option

Reload Math Equations

- [x] 0
- [ ] 2
- [ ] 1
- [ ] -1

Click to Save Answer & Move to Next Question

MC170200890: Awwal Khan

Time Left 70 sec(s)

MTH621:Quiz 4 -Lectures 30 to 37

Quiz Start Time: 10:31 PM, 06 February 2018

Question # 7 of 10 (Start time: 10:33:35 PM, 06 February 2018) Total Marks: 1

The inverse of the given function $f(x) = 2x + 4,\quad 0 \leqslant x \leqslant 2,$ is

Select the correct option

- ● ${f^{ - 1}}(y) = \frac{{y - 4}}{2}.$
- ○ ${f^{ - 1}}(y) = \frac{{y - 2}}{4}.$
- ○ ${f^{ - 1}}(y) = \frac{{x - 2}}{4}.$
- ○ ${f^{ - 1}}(y) = \frac{{y - 4}}{4}$

Click to Save Answer & Move to Next Question

MC170200890: Awwal Khan

Time Left 79 sec(s)

MTH621:Quiz 4 -Lectures 30 to 37

Quiz Start Time: 10:31 PM, 06 February 2018

Question # 3 of 10 (Start time: 10:32:11 PM, 06 February 2018) Total Marks: 1

The function $g(x) = x^2$ is

Select the correct option

Reload Math Equations

- ○ decreasing on $[0, \infty)$.
- ● increasing on $[0, \infty)$.
- ○ having negative values on $[0, \infty)$.
- ○ undefined on $[0, \infty)$.

Click to Save Answer & Move to Next Question

MC170202886: Aqsa Zunaira

Time Left 83 sec(s)

MTH621:Quiz 3 - Lecture 23 to 27

Quiz Start Time: 09:46 PM, 18 January 2018

Question # 6 of 10 (Start time: 09:47:44 PM, 18 January 2018)

Total Marks: 1

If $\lim_{x \to 0} f(x) = 10$ and $\lim_{x \to 0} g(x) = -2$ then $\lim_{x \to 0} \frac{f(x)}{g(x)}$ is

Select the correct option

Reload Math Equations

- -10
- 5
- 0
- -5

Click to Save Answer & Move to Next Question

MC170200890: Awwal Khan

Time Left 81 sec(s)

MTH621:Quiz 4 -Lectures 30 to 37

Quiz Start Time: 10:31 PM, 06 February 2018

Question # 6 of 10 (Start time: 10:33:22 PM, 06 February 2018) **Total Marks: 1**

Generalized Mean Value Theorem says. If f and g are continuous on the closed interval $[a, b]$ and differentiable on the open interval (a, b), then

Select the correct option

Reload Math Equations

- ● $[g(b) - g(a)]f'(c) = [f(b) - f(a)]g'(c)$ for some c in (a, b).
- ○ $[g(b) - g(a)] = [f(b) - f(a)]g'(c)$ for some c in (a, b).
- ○ $g'(x) = 0$ for all x in (a, b).
- ○ $g'(x) = f'(x)$ for all x in (a, b).

Click to Save Answer & Move to Next Question

MC170202886: Aqsa Zunaira

Time Left 84 sec(s)

MTH621:Quiz 4 -Lectures 30 to 37

Quiz Start Time: 10:03 PM, 06 February 2018

Question # 7 of 10 (Start time: 10:05:25 PM, 06 February 2018) Total Marks: 1

The derivative of the function x^n is

Select the correct option

Reload Math Equations

- x^{n-1}.
- nx^{n-1}.
- $\frac{n}{x^{n-1}}$.
- nx^n.

Click to Save Answer & Move to Next Question

MC170201745: Shakeel Ahmad

Time Left 40 sec(s)

MTH621:Quiz 3 - Lecture 23 to 27

Quiz Start Time: 07:47 PM, 16 January 2018

Question # 7 of 10 (Start time: 07:52:40 PM, 16 January 2018) Total Marks: 1

For the function defined as

$$f(x) = cx,$$

for every $\epsilon > 0$ the formal definition ensures

Select the correct option

Reload Math Equations

- $|f(x) - cx_0| <, \quad |x - x_0| < \delta, \text{ where } 0 < \delta < \epsilon.$
- $|f(x) - cx_0| <, \quad |x - x_0| < \delta, \text{where } 0 < \delta < \epsilon/|c|.$
- $|f(x) - cx_0| <, \quad |x - x_0| < \delta, \text{where } -\epsilon < \delta < \epsilon.$
- $|f(x) - cx_0| <, \quad |x - x_0| < \delta, \text{where } 0 < \delta < \epsilon.$

Click to Save Answer & Move to Next Question

MC170202886: Aqsa Zunaira

Time Left 80 sec(s)

MTH621:Quiz 3 - Lecture 23 to 27

Quiz Start Time: 09:46 PM, 18 January 2018

Question # 4 of 10 (Start time: 09:47:08 PM, 18 January 2018) Total Marks: 1

If $\lim_{x \to 0} f(x) = 10$ and $\lim_{x \to 0} g(x) = -2$ then $\lim_{x \to 0}(\frac{f(x)}{g(x)}$ is

Select the correct option

Reload Math Equations

- -10.
- 5.
- 0.
- -5.

Click to Save Answer & Move to Next Question

MC170200890: Awwal Khan

Time Left 67 sec(s)

MTH621:Quiz 4 -Lectures 30 to 37

Quiz Start Time: 10:31 PM, 06 February 2018

Question # 5 of 10 (Start time: 10:32:56 PM, 06 February 2018) Total Marks: 1

The function $f(x) = \begin{cases} x, & 0 \leqslant x < 1, \\ 2, & 1 \leqslant x \leqslant 2, \end{cases}$ is

Select the correct option

Reload Math Equations

- is nondecreasing on $I = [0, 2]$.
- is nonincreasing on $I = [0, 2]$.
- is having negative values on $I = [0, 2]$.
- is undefined on $I = [0, 2]$.

Click to Save Answer & Move to Next Question

MC170202886: Aqsa Zunaira

Time Left 61 sec(s)

MTH621:Quiz 4 -Lectures 30 to 37

Quiz Start Time: 10:03 PM, 06 February 2018

Question # 6 of 10 (Start time: 10:04:50 PM, 06 February 2018) Total Marks: 1

The function $f(x) = \begin{cases} x, & 0 \leq x < 1, \\ 2, & 1 \leq x \leq 2, \end{cases}$ is

Select the correct option

Reload Math Equations

- is nondecreasing on $I = [0, 2]$.
- is nonincreasing on $I = [0, 2]$.
- is having negative values on $I = [0, 2]$.
- is undefined on $I = [0, 2]$.

Click to Save Answer & Move to Next Question

MC170200890: Awwal Khan

Time Left 84 sec(s)

MTH621:Quiz 4 -Lectures 30 to 37

Quiz Start Time: 10:31 PM, 06 February 2018

Question # 9 of 10 (Start time: 10:34:12 PM, 06 February 2018) Total Marks: 1

The inverse of the function $f(x) = x^2$, is

Select the correct option

Reload Math Equations

- $f^{-1}(y) = y^2$
- $f^{-1}(y) = \sqrt{y}$.
- $f^{-1}(y) = \frac{1}{x^2}$
- $f^{-1}(y) = \frac{1}{y^2}$

Click to Save Answer & Move to Next Question

MC170202886: Aqsa Zunaira

Time Left 69 sec(s)

MTH621:Quiz 3 - Lecture 23 to 27

Quiz Start Time: 09:46 PM, 18 January 2018

Question # 1 of 10 (Start time: 09:46:10 PM, 18 January 2018) Total Marks: 1

If $f(x) = \log x$ and $g(x) = \frac{1}{1-x^2}$, then $f \circ g$ is

Select the correct option

Reload Math Equations

- (●) $(f \circ g)(x) = \log \frac{1}{1-x^2}$.
- ( ) $(f \circ g)(x) = \log \frac{x}{1-x^2}$.
- ( ) $(f \circ g)(x) = \log \frac{1}{x^2}$.
- ( ) $(f \circ g)(x) = \log \frac{-1}{1-x^2}$.

Click to Save Answer & Move to Next Question

MC170200890: Awwal Khan

Time Left 64 sec(s)

MTH621:Quiz 4 -Lectures 30 to 37

Quiz Start Time: 10:31 PM, 06 February 2018

Question # 4 of 10 (Start time: 10:32:26 PM, 06 February 2018) Total Marks: 1

Rolle's Theorem says, suppose that f is continuous on the closed interval $[a, b]$ and differentiable on the open interval (a, b) and $f(a) = f(b)$.

Select the correct option

Reload Math Equations

- [x] Then $f'(c) = 0$ for some c in the open interval (a, b).
- [ ] Then $f'(c) \neq 0$ for some c in the open interval (a, b).
- [ ] Then $f'(c)$ exists for some c in the open interval (a, b).
- [ ] Then $f'(c) = 0$ for some c in the open interval (a, ∞).

Click to Save Answer & Move to Next Question

MC170201745: Shakool Ahmad

Time Left 38 sec(s)

MTH621:Quiz 2

Quiz Start Time: 02:06 PM, 28 November 2017

Question # 9 of 10 (Start time: 02:14:42 PM, 28 November 2017) Total Marks: 1

Every Cauchy sequence has a

Select the correct option

- convergent subsequence.
- increasing subsequence.
- decreasing subsequence.
- positive subsequence.

MC170201745: Shakool Ahmad

Time Left 61 sec(s)

MTH621:Quiz 4 -Lectures 30 to 37

Quiz Start Time: 09:37 PM, 06 February 2018

Question # 9 of 10 (Start time: 09:41:59 PM, 06 February 2018) **Total Marks: 1**

Generalized Mean Value Theorem says. If f and g are continuous on the closed interval $[a, b]$ and differentiable on the open interval (a, b), then

Select the correct option

Reload Math Equations

- $[g(b) - g(a)]f'(c) = [f(b) - f(a)]g'(c)$ for some c in (a, b).
- $[g(b) - g(a)] = [f(b) - f(a)]g'(c)$ for some c in (a, b).
- $g'(x) = 0$ for all x in (a, b).
- $g'(x) = f'(x)$ for all x in (a, b).

Click to Save Answer & Move to Next Question

MC170202886: Aqsa Zunaira

Time Left 82 sec(s)

MTH621:Quiz 3 - Lecture 23 to 27

Quiz Start Time: 09:46 PM, 18 January 2018

Question # 2 of 10 (Start time: 09:46:36 PM, 18 January 2018) Total Marks: 1

The $\lim_{x \to 2}(3x - 5) =$

Select the correct option

Reload Math Equations

- 0.
- 1.
- -1.
- -2.

Click to Save Answer & Move to Next Question

MC170201745: Shakool Ahmad

Time Left 56 sec(s)

MTH621:Quiz 2

Quiz Start Time: 02:06 PM, 28 November 2017

Question # 6 of 10 (Start time: 02:11:19 PM, 28 November 2017) Total Marks: 1

$\limsup_{n \to \infty} s_n = \infty$ if

Select the correct option

Reload Math Equations

- $\{s_n\}$ is not bounded above.
- $\{s_n\}$ has unique limit.
- $\{s_n\}$ is convergent.
- $\{s_n\}$ has limit inferior.

MC170202886: Aqsa Zunaira

Time Left 78 sec(s)

MTH621:Quiz 3 - Lecture 23 to 27

Quiz Start Time: 09:46 PM, 18 January 2018

Question # 10 of 10 (Start time: 09:49:37 PM, 18 January 2018) Total Marks: 1

The value of $x + \lim_{x \to 0+} \frac{|x|}{x} =$

Select the correct option

Reload Math Equations

- $x - 1.$
- $x + 1.$
- $x.$
- $x + 1/x.$

Click to Save Answer & Move to Next Question

MC170201745: Shakeel Ahmad

Time Left 77 sec(s)

MTH621:Quiz 3 - Lecture 23 to 27

Quiz Start Time: 07:47 PM, 16 January 2018

Question # 5 of 10 (Start time: 07:51:09 PM, 16 January 2018) Total Marks: 1

For the function $f(x) = x \sin \frac{1}{x}, \quad x \neq 0$, which statement is true

Select the correct option

Reload Math Equations

- $\lim_{x \to 1/\pi} f(x) = 0.$
- The function is not defined at $x = 0.$
- $\lim_{x \to 0} f(x) = 1.$
- $\lim_{x \to 0} f(x) = 0.$

Click to Save Answer & Move to Next Question

MC170200890: Awwal Khan

Time Left 84 sec(s)

MTH621:Quiz 4 -Lectures 30 to 37

Quiz Start Time: 10:31 PM, 06 February 2018

Question # 1 of 10 (Start time: 10:31:47 PM, 06 February 2018) Total Marks: 1

$\lim_{x \to 0+} x \log x$, has the following indeterminate form

Select the correct option

Reload Math Equations

- ○ $\infty \times \infty$.
- ● $(0)(\infty)$.
- ○ $\frac{0}{0}$.
- ○ 0^{∞}.

Click to Save Answer & Move to Next Question

MC170202886: Aqsa Zunaira

Time Left 82 sec(s)

MTH621:Quiz 4 -Lectures 30 to 37

Quiz Start Time: 10:03 PM, 06 February 2018

Question # 8 of 10 (Start time: 10:05:33 PM, 06 February 2018) Total Marks: 1

$\lim_{x \to 0+} x \log x$, has the following indeterminate form

Select the correct option

Reload Math Equations

- $\infty \times \infty$.
- $(0)(\infty)$.
- $\frac{0}{0}$.
- 0^{∞}.

Click to Save Answer & Move to Next Question

MC170201745: Shakeel Ahmad

Time Left 80 sec(s)

MTH621:Quiz 3 - Lecture 23 to 27

Quiz Start Time: 07:47 PM, 16 January 2018

Question # 2 of 10 (Start time: 07:48:16 PM, 16 January 2018) Total Marks: 1

The $\lim_{x \to 2}(3x - 5) =$

Select the correct option

Reload Math Equations

- 0.
- 1.
- -1.
- -2.

Click to Save Answer & Move to Next Question

MC170202886: Aqsa Zunaira

Time Left 68 sec(s)

MTH621:Quiz 4 -Lectures 30 to 37

Quiz Start Time: 10:03 PM, 06 February 2018

Question # 1 of 10 (Start time: 10:03:05 PM, 06 February 2018) Total Marks: 1

If a function f is continuous on the closed interval then f attains its

Select the correct option

Reload Math Equations

- (●) extreme values in the closed interval.
- ( ) extreme values at one point in the closed interval.
- ( ) may or may not attain extreme values in the closed interval.
- ( ) derivative in the closed interval.

Click to Save Answer & Move to Next Question

MC170200890: Awwal Khan

Time Left 80 sec(s)

MTH621:Quiz 4 -Lectures 30 to 37

Quiz Start Time: 10:31 PM, 06 February 2018

Question # 8 of 10 (Start time: 10:33:58 PM, 06 February 2018) Total Marks: 1

If a function f is continuous on the closed interval then f attains its

Select the correct option

Reload Math Equations

- (●) extreme values in the closed interval.
- ( ) extreme values at one point in the closed interval.
- ( ) may or may not attain extreme values in the closed interval.
- ( ) derivative in the closed interval.

Click to Save Answer & Move to Next Question

MC170201745: Shakeel Ahmad

Time Left 76 sec(s)

MTH621:Quiz 3 - Lecture 23 to 27

Quiz Start Time: 07:47 PM, 16 January 2018

Question # 8 of 10 (Start time: 07:53:43 PM, 16 January 2018) Total Marks: 1

The value of $x + \lim_{x \to 0+} \frac{|x|}{x} =$

Select the correct option

Reload Math Equations

- $x - 1.$
- $x + 1.$
- $x.$
- $x + 1/x.$

Click to Save Answer & Move to Next Question

MC170201745: Shakool Ahmad

Time Left 38 sec(s)

MTH621:Quiz 2

Quiz Start Time: 02:06 PM, 28 November 2017

Question # 10 of 10 (Start time: 02:15:53 PM, 28 November 2017) Total Marks: 1

The limit of the sequence

$$s_n = \frac{1}{n} + \frac{2(1+3/n)}{1+1/n}.$$

Select the correct option

Reload Math Equations

- 1
- 4
- 3
- 2