MC180405026: SYED AHSAN ALI

Time Left 86 sec(s)

MTH641:Grand Quiz

Quiz Start Time: 04:38 PM, 08 July 2020

Question # 28 of 30 (Start time: 05:06:24 PM, 08 July 2020) Total Marks: 1

Vector space X={0} has

Select the correct option

- proper subspace.
- no proper subspace.
- infinite dimensional.
- none of given options.

Click to Save Answer & Move to Next Question

MC180405026: SYED AHSAN ALI

MTH641:Grand Quiz

Question # 27 of 30 (Start time: 05:04:39 PM, 08 July 2020)

Vector space X is called complex vector space if

Select the correct option

○	$K = \mathbb{R}$
○	$K = \mathbb{C}$
○	$K = \mathbb{Q}$
○	$K = \mathbb{N}$

MC180404530: MUHAMMAD ASIF

Time Left 88 sec(s)

MTH641:Grand Quiz

Quiz Start Time: 02:19 PM, 08 July 2020

Question # 22 of 30 (Start time: 02:38:36 PM, 08 July 2020)

Total Marks: 1

A discrete metric space X is Separable iff X is .....

Select the correct option

- Complete
- Nowhere dense
- Countable
- Dense

Example 2:

$$a_n = \left\{\frac{1}{n}\right\}_{n=1}^{\infty} \subset (0,1]$$

is a Cauchy sequence as $a_n \to 0 \notin (0,1]$

Hence the sequence a_n in space X is converging to 0 but this does not belong to tha
0,1], the function define on space is

$$d(x,y) = |x,y| \text{ is Cauchy.}$$

⇒ this space (0,1] is not complete.

For every Cauchy sequence, it should converge to element of that space; if it onverges to space then we say that it is complete space.

MODULE NO. 27

ere we relate the convergent sequence and bounded sequence.

THEOREM CONVERGENT SEQUENCE:

heorem: M.C.Q

Every convergent sequence in a metric space is a Cauchy sequence.

roof:

Let $\{x_n\}$ be a convergent sequence such that $x_n \to x$ for every $\varepsilon > 0$ the

$= N(\varepsilon)$ *such that* $d(x_n, x) < \frac{\varepsilon}{2}$ $\forall$ n>N

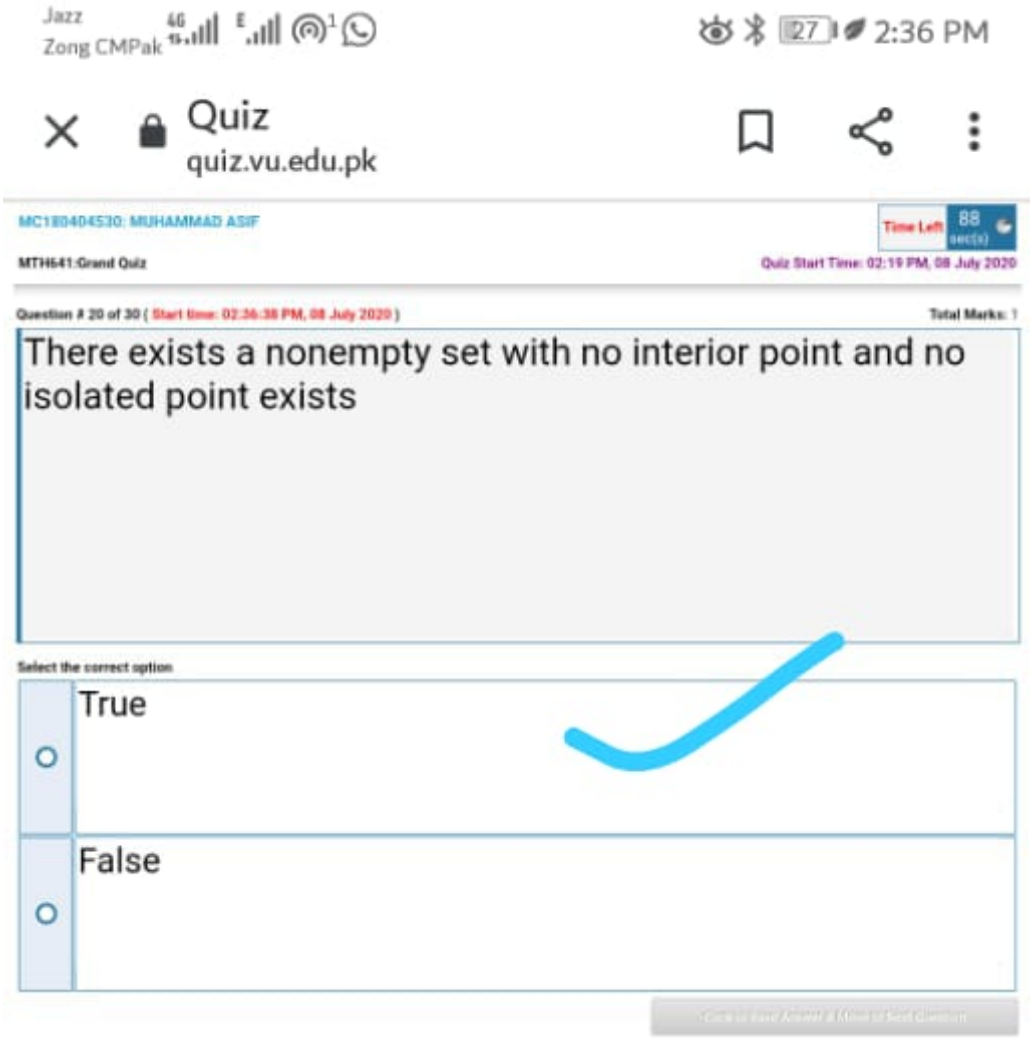
w we have to prove that $\{x_n\}$ is a Cauchy sequence, for this we have to pro

$$d(x_m, x_n) < \varepsilon \quad ; \quad m,n > N$$

first choose that m>N then by triangular inequality,

$$d(x_m, x_n) \le d(x_m, x) + d(x_n, x) \quad ; \quad m,n > N$$

$$d(x_m, x) < \frac{\varepsilon}{2} \quad , \quad d(x_n, x) < \frac{\varepsilon}{2}$$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Quiz
quiz.vu.edu.pk
MC180404530: MUHAMMAD ASIF
Time Left 88 sec(s)
MTH641:Grand Quiz
Quiz Start Time: 02:19 PM, 08 July 2020
Question # 20 of 30 (Start time: 02:36:38 PM, 08 July 2020)
Total Marks: 1
There exists a nonempty set with no interior point and no isolated point exists
Select the correct option
True
False

MC180404530: MUHAMMAD ASIF

Time Left 89 sec(s)

MTH641:Grand Quiz

Quiz Start Time: 02:19 PM, 08 July 2020

Question # 18 of 30 (Start time: 02:35:59 PM, 08 July 2020)

Total Marks: 1

A .....sequence in a metric space is Cauchy Sequence.

Select the correct option

- Convergent
- Bounded
- Divergent
- Subsequence

MC180404530: MUHAMMAD ASIF

Time Left 81 sec(s)

MTH641:Grand Quiz

Quiz Start Time: 02:19 PM, 08 July 2020

Question # 17 of 30 (Start time: 02:35:09 PM, 08 July 2020)

Total Marks: 1

Identity operator is

Select the correct option

- linear operator.
- non linear operator.
- Zero operator.
- discontinuous operator.

MC180404530: MUHAMMAD ASIF

MTH641:Grand Quiz

Question # 16 of 30 (Start time: 02:34:05 PM, 08 July 2020)

If $(\mathbb{R}, d)$ be a usual metric space, then which of the following is a correct choice about $\mathbb{R}$?

Select the correct option

- $\mathbb{R}$ is a neighbourhood of each of its points.
- $\mathbb{R}$ is an open set.
- Its every point is an interior point.
- All of them.

If d is a metric on Y. Then for all x, y ∈ Y d(x,y) is_

Select the correct option

- A non negative real number
- A negative real number
- Not a rational number
- A complex number

MC180404530: MUHAMMAD ASIF

MTH641:Grand Quiz

Question # 13 of 30 (Start time: 02:30:37 PM, 08 July 2020)

If $(\mathbb{R}, d)$ be a usual metric space and $\mathbb{Z} \subseteq \mathbb{R}$ then which of the following is a correct choice about $\mathbb{Z}$?

Select the correct option

- None of its point is an interior point.
- It is not an open set.
- It has disjoint intersection with the set of its interior points.
- All of them.

MC180404530: MUHAMMAD ASIF

Time Left 85 sec(s)

MTH641:Grand Quiz

Quiz Start Time: 02:19 PM, 08 July 2020

Question # 14 of 30 (Start time: 02:31:49 PM, 08 July 2020)

Total Marks: 1

Which of the following set has no limit points in R?

Select the correct option

- The set of rational numbers
- The set of Irrational numbers
- The set of complex numbers
- The set of integers

Showing results for ***integration*** operator is linear

Search instead for integraion operator is linear

Integral operator.
$A\phi(t)=\int DK(t,\tau)\phi(\tau)d\tau$, $t\in D$. The **operator** generated by the **integral** in (2), or simply the **operator** (2), is called a **linear integral operator**, and the function K is called its kernel (cf. also Kernel of an **integral operator**).

Jun 5, 2020

https://encyclopediaofmath.org › wiki

Integral operator - Encyclopedia of Mathematics

About Featured Snippets Feedback

PEOPLE ALSO ASK

Is integration linear or nonlinear?

What is meant by linear operator?

What is the kernel of an integral?

Integration operator from $C[a, b]$ into itself is

Select the correct option

- linear operator.
- non linear operator.
- Zero operatotr.
- discontinuous operator.

MC180404530: MUHAMMAD ASIF

Time Left 85 sec(s)

MTH641:Grand Quiz

Quiz Start Time: 02:19 PM, 08 July 2020

Question # 11 of 30 (Start time: 02:29:14 PM, 08 July 2020)

Total Marks: 1

The real line R is a complete metric space having two ..... dense subsets

Select the correct option

- disjoint
- overlapping
- finite
- infinite

MC180404530: MUHAMMAD ASIF

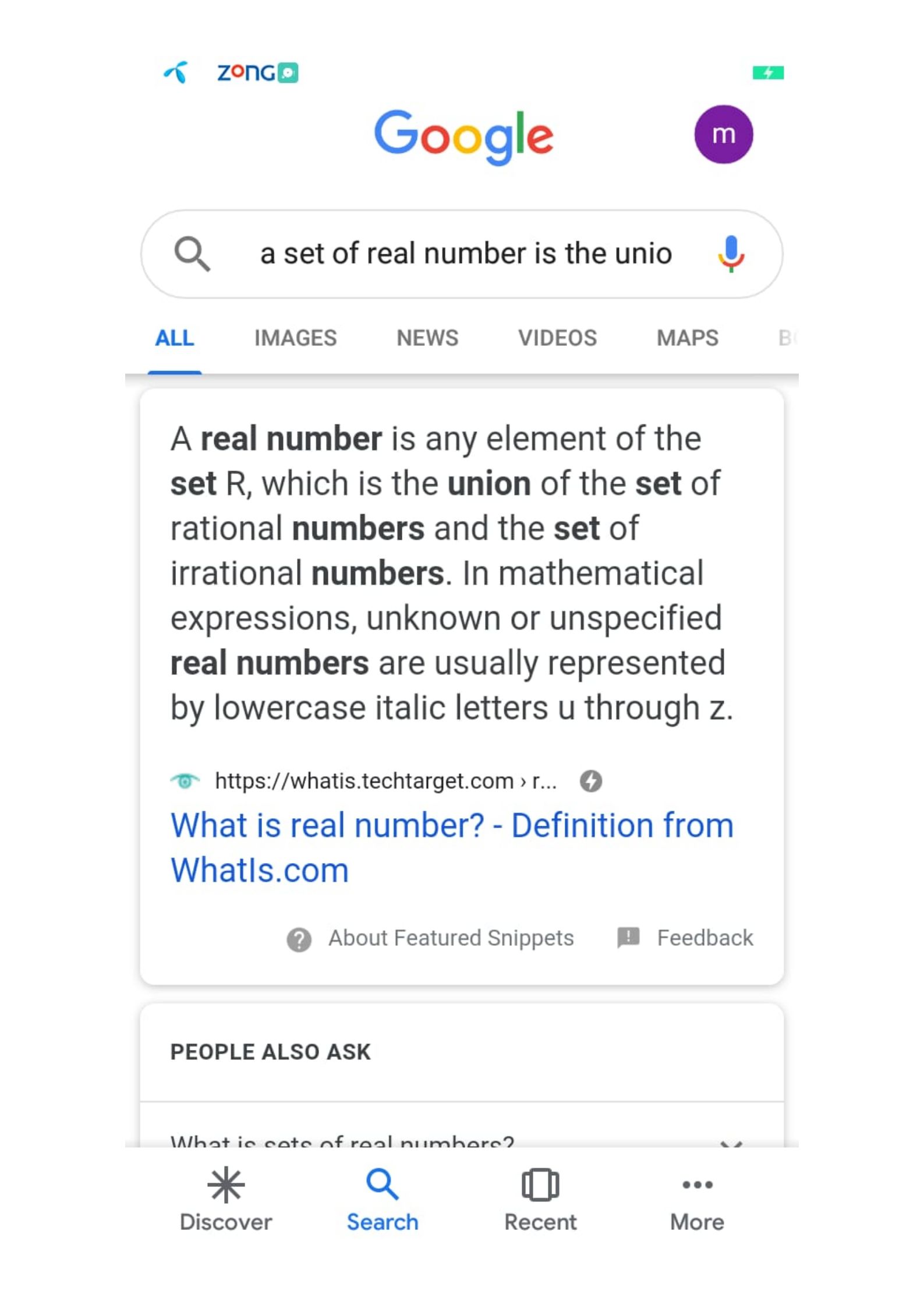
MTH641:Grand Quiz Quiz

Question # 10 of 30 (Start time: 02:28:19 PM, 08 July 2020)

In functional analysis field is taken

Select the correct option

- R or Z.
- Q or N.
- Q
- R or C.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m
a set of real number is the unio
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A real number is any element of the set R, which is the union of the set of rational numbers and the set of irrational numbers. In mathematical expressions, unknown or unspecified real numbers are usually represented by lowercase italic letters u through z.
https://whatis.techtarget.com › r...
What is real number? - Definition from WhatIs.com
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MC180404530: MUHAMMAD ASIF

Time Left 89 sec(s)

MTH641:Grand Quiz

Quiz Start Time: 02:19 PM, 08 July 2020

Question # 9 of 30 (Start time: 02:27:28 PM, 08 July 2020)

Total Marks: 1

The set of real numbers is the union of .....

Select the correct option

- set of natural numbers & whole numbers
- set of rational numbers & irrational numbers
- set of negative integers and positive integers
- set of complex numbers and natural numbers

MC180404530: MUHAMMAD ASIF

Time Left 85 sec(s)

MTH641:Grand Quiz

Quiz Start Time: 02:19 PM, 08 July 2020

Question # 8 of 30 (Start time: 02:26:55 PM, 08 July 2020)

Total Marks: 1

In a discrete metric space X, every subset is

Select the correct option

- open and closed.
- open.
- closed.
- countable.

Question # 7 of 30 (Start time: 02:26:05 PM, 08 July 2020)

$\mathbb{R}^n$ is

Select the correct option

○	Euclidean space and complete.
○	Euclidean space and incomplete.
○	Unitary space and complete.
○	Unitary space and incomplete.

MC180404530: MUHAMMAD ASIF

MTH641:Grand Quiz

Question # 4 of 30 (Start time: 02:22:19 PM, 08 July 2020)

Let (X, d) be a metric space and $A \subseteq X$, then the limit point of A____.

Select the correct option

- must be an element of A
- may or may not be an element of A
- must be an element of both X and A
- None of them.

MC180404530: MUHAMMAD ASIF

Time Left 84 sec(s)

MTH641:Grand Quiz

Quiz Start Time: 02:19 PM, 08 July 2020

Question # 3 of 30 (Start time: 02:21:07 PM, 08 July 2020)

Total Marks: 1

If M is a compact metric space then M has a ____.

Select the correct option

Reload Math Equations

- (●) Heine Borel Property
- ( ) Mean Value property

Click to Save Answer & Move to Next Question

Google

a mapping from a normed space

ALL VIDEOS IMAGES NEWS BOOKS

A mapping from a normed space X **into** a **normed space** Y is **called** an operator. **A mapping** from X **into** the **scalar field** R or C is **called** a functional. Of particular importance are so-**called** bounded linear operators (cf. 2.7-1) and bounded linear functionals (cf.

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Section 2

About Featured Snippets

Feedback

PEOPLE ALSO ASK

What is a vector space over a field?

MC180404530: MUHAMMAD ASIF

Time Left 87 sec(s)

MTH641:Grand Quiz

Quiz Start Time: 02:19 PM, 08 July 2020

Question # 2 of 30 (Start time: 02:20:25 PM, 08 July 2020) Total Marks: 1

Let $(\mathbb{R}, d)$ be a usual metric space and $\mathbb{R} - \mathbb{Q} \subseteq \mathbb{R}$, then which of the following is correct option?

Select the correct option

Reload Math Equations

- The set of limit points of $\mathbb{R} - \mathbb{Q}$ is open.
- The set of limit points of $\mathbb{R} - \mathbb{Q}$ is closed.
- The set of limit points of $\mathbb{R} - \mathbb{Q}$ is an empty set.
- None of them.

MC180201270: YASIR FAROOQ

Time Left 88 sec(s)

MTH641:Grand Quiz

Quiz Start Time: 12:19 PM, 08 July 2020

Question # 10 of 30 (Start time: 12:30:18 PM, 08 July 2020)

Total Marks: 1

If d is a usual metric on R , then d(2,8)=

Select the correct option

Reload Math Equations

- $\int_0^2 dx$
- $2 + \int_0^2 2x dx$
- $1 - \int_2^3 dx$
- $\int_0^2 (2x + 1) dx$

Click to Save Answer & Move to Next Question

MC180201270: YASIR FAROOQ

Time Left 87 sec(s)

MTH641:Grand Quiz

Quiz Start Time: 12:19 PM, 08 July 2020

Question # 12 of 30 (Start time: 12:32:49 PM, 08 July 2020)

Total Marks: 1

In a discrete metric space X, every subset is

Select the correct option

- open and closed.
- open.
- closed.
- countable.

Click to Save Answer & Move to Next Question

Question # 25 of 30 (Start time: 05:01:29 PM, 08 July 2020)

l^p and l^∞

Select the correct option

○	both spaces are complete.
○	both spaces are incomplete.
○	only space l^p is complete.
○	only space l^∞ is incomplete..

MC180201270: YASIR FAROOQ

Time Left 88 sec(s)

MTH641:Grand Quiz

Quiz Start Time: 12:19 PM, 08 July 2020

Question # 1 of 30 (Start time: 12:19:14 PM, 08 July 2020)

Total Marks: 1

Vector space X={0} has

Select the correct option

- proper subspace.
- no proper subspace.
- infinite dimensional.
- none of given options.

MC180201270: YASIR FAROOQ

Time Left 89 sec(s)

MTH641:Grand Quiz

Quiz Start Time: 12:19 PM, 08 July 2020

Question # 13 of 30 (Start time: 12:33:40 PM, 08 July 2020)

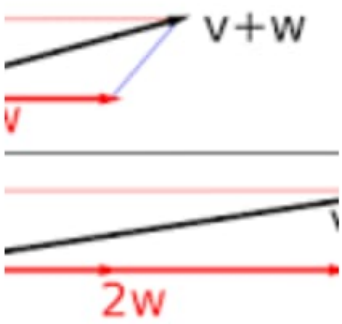
Total Marks: 1

Which of the following set has no limit points in R?

Select the correct option

- The set of rational numbers
- The set of Irrational numbers
- The set of complex numbers
- The set of integers

In this article, **vectors** are represented **in** boldface to distinguish them from scalars. **A vector space over a field** F is a set V together with two operations that satisfy the eight axioms listed below. ... : F × V → V , **takes** any scalar a and any **vector** v and gives another **vector** av.



https://en.m.wikipedia.org › wiki

Vector space - Wikipedia

About Featured Snippets Feedback

PEOPLE ALSO ASK

MC180201270: YASIR FAROOQ

Time Left 88 sec(s)

MTH641:Grand Quiz

Quiz Start Time: 12:19 PM, 08 July 2020

Question # 7 of 30 (Start time: 12:27:09 PM, 08 July 2020)

Total Marks: 1

Identity operator is

Select the correct option

- linear operator.
- non linear operator.
- Zero operator.
- discontinuous operator.

MC180201270: YASIR FAROOQ

Time Left 88 sec(s)

MTH641:Grand Quiz

Quiz Start Time: 12:19 PM, 08 July 2020

Question # 21 of 30 (Start time: 12:50:03 PM, 08 July 2020) Total Marks: 1

Let $(\mathbb{R}, d)$ be a usual metric space and $A = (2, 3) \subseteq \mathbb{R}$, then which of the following is correct option?

Select the correct option

Reload Math Equations

- 2 is not a limit point of A.
- 3 is not a limit point of A.
- 2.5 is not a limit point of A.
- None of them.

Click to Save Answer & Move to Next Question

MC180201270: YASIR FAROOQ

Time Left 90 sec(s)

MTH641:Grand Quiz

Quiz Start Time: 12:19 PM, 08 July 2020

Question # 22 of 30 (Start time: 12:51:58 PM, 08 July 2020) Total Marks: 1

Unitary space is

Select the correct option

Reload Math Equations

- Vector space.
- Normed space.
- Banach space.
- space of all types mentioned.

MC180405026: SYED AHSAN ALI

Time Left 86 sec(s)

MTH641:Grand Quiz

Quiz Start Time: 04:38 PM, 08 July 2020

Question # 26 of 30 (Start time: 05:03:19 PM, 08 July 2020) Total Marks: 1

The interior of M is the set of all

Select the correct option

- isolated points of M.
- interior points of M.
- all open balls of M.
- all closed balls of M.

MC180201270: YASIR FAROOQ

Time Left 85 sec(s)

MTH641:Grand Quiz

Quiz Start Time: 12:19 PM, 08 July 2020

Question # 20 of 30 (Start time: 12:48:49 PM, 08 July 2020)

Total Marks: 1

If $F_1, F_2, F_3, \ldots, F_n, \ldots$ be a sequence of closed sets such that $F_1 \supseteq F_2 \supseteq F_3 \supseteq \cdots \supseteq F_n \supseteq \ldots$, then $\bigcap_n F_n$ is nonempty.

Select the correct option

Reload Math Equations

- True
- False

Click To Save Answer & Move to Next Question

MC180201270: YASIR FAROOQ

Time Left 78 sec(s)

MTH641:Grand Quiz

Quiz Start Time: 12:19 PM, 08 July 2020

Question # 2 of 30 (Start time: 12:19:44 PM, 08 July 2020)

Total Marks: 1

A vector space is taken over a

Select the correct option

Reload Math Equations

- normed space.
- field.
- function.
- functional.

Click to Save Answer & Move to Next Question

MC180201270: YASIR FAROOQ

Time Left 84 sec(s)

MTH641:Grand Quiz

Quiz Start Time: 12:19 PM, 08 July 2020

Question # 6 of 30 (Start time: 12:25:17 PM, 08 July 2020)

Total Marks: 1

Space l^p is

Select the correct option

Reload Math Equations

- incomplete normed space.
- complete vector space.
- Banach space.
- Null space.

MC180201270: YASIR FAROOQ

Time Left 81 sec(s)

MTH641:Grand Quiz

Quiz Start Time: 12:19 PM, 08 July 2020

Question # 11 of 30 (Start time: 12:31:18 PM, 08 July 2020) Total Marks: 1

Let $(\mathbb{R}, d)$ be a usual metric space and $\mathbb{Q} \subseteq \mathbb{R}$, then which of the following is correct option?

Select the correct option

Reload Math Equations

- The set of limit points of $\mathbb{Q}$ is open.
- The set of limit points of $\mathbb{Q}$ is closed.
- The set of limit points of $\mathbb{Q}$ is an empty set.
- None of them.

Click to Save Answer & Move to Next Question

Question # 24 of 30 (Start time: 05:00:31 PM, 08 July 2020)

l_p is a space in which every point is a

Select the correct option

○	sequence.
○	function.
○	set.
◉	either set or function.

MC180201270: YASIR FAROOQ

Time Left 86 sec(s)

MTH641:Grand Quiz

Quiz Start Time: 12:19 PM, 08 July 2020

Question # 3 of 30 (Start time: 12:20:43 PM, 08 July 2020)

Total Marks: 1

The Centre of the sphere $S(6;\ 8)$ is

Select the correct option

Reload Math Equations

- $\int_2^4 x^2 dx$
- $\frac{1}{2}\int_2^4 x^2 dx$
- $\int_2^4 x dx$
- $\frac{1}{2}\int_2^4 x^{\frac{1}{2}} dx$

Click to Save Answer & Move to Next Question

Question # 26 of 30 (Start time: 04:59:39 PM, 08 July 2020)

Total Marks: 1

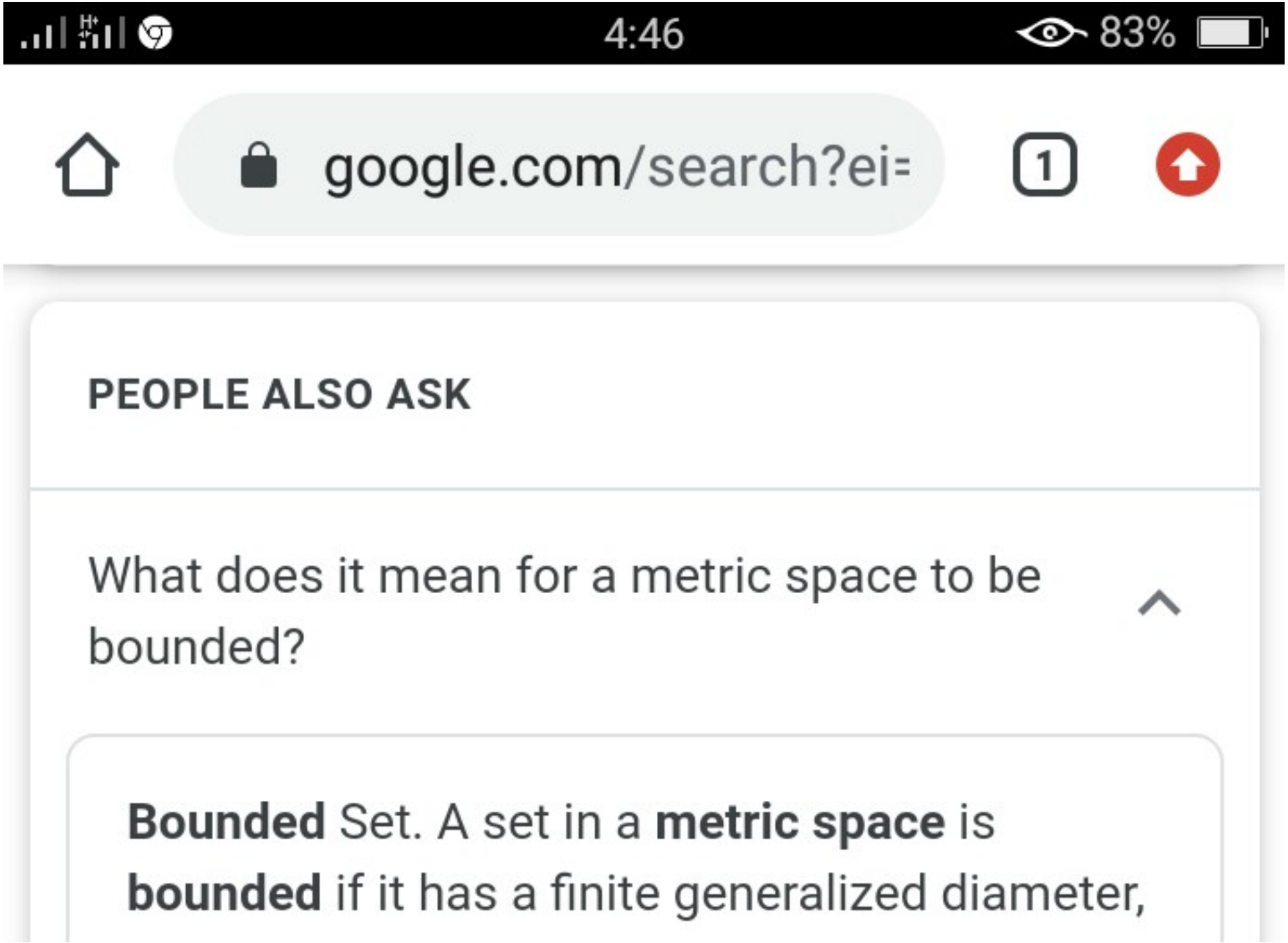
In the real line $\mathbb{R}$ with the discrete metric, the rationals $\mathbb{Q}$ are____.

Select the correct option

Reload Math Equations

○	open, Closed, Bounded, and Compact
○	complete, Connected, Open, and Bounded
○	bounded, Closed, Complete, and Open
○	closed, Compact, Complete and Connected

Click to Save Answer & Move to Next Question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PEOPLE ALSO ASK
What does it mean for a metric space to be bounded?
Bounded Set. A set in a **metric space** is **bounded** if it has a finite generalized diameter,

Question # 22 of 30 (Start time: 04:58:16 PM, 08 July 2020)

$L^2[a, b]$ is

Select the correct option

○	Normed space.
○	Complete space.
○	Banach space.
○	Null space.

MC180201270: YASIR FAROOQ

Time Left 88 sec(s)

MTH641:Grand Quiz

Quiz Start Time: 12:19 PM, 08 July 2020

Question # 4 of 30 (Start time: 12:21:53 PM, 08 July 2020)

Total Marks: 1

If for k>0 , $d(3,9)=\frac{1+kd_1(3,9)}{kd_1(3,9)}$ where d_1 represents the usual metric on R then

Select the correct option

Reload Math Equations

- d(3,9)>1
- d(3,9)<1
- d(3,9)=1
- d(3,9)=0

Click to Save Answer & Move to Next Question

MC180201270: YASIR FAROOQ

Time Left 84 sec(s)

MTH641:Grand Quiz

Quiz Start Time: 12:19 PM, 08 July 2020

Question # 19 of 30 (Start time: 12:47:34 PM, 08 July 2020) Total Marks: 1

The sequence $x_n = \frac{1}{n}$ converges to

Select the correct option

Reload Math Equations

- 1.
- 0
- two limits.
- ∞

Click to Save Answer & Move to Next Question

MC180405026: SYED AHSAN ALI

MTH641:Grand Quiz

Question # 20 of 30 (Start time: 04:56:09 PM, 08 July 2020)

In R^2 an open neighborhood is .....

Select the correct option

- (●) An open disc
- ( ) An open ball
- ( ) An open interval
- ( ) An open sphere

Question # 19 of 30 (Start time: 04:54:41 PM, 08 July 2020)

Let $(\mathbb{R}, d)$ be a usual metric space and $\mathbb{Q} \subseteq \mathbb{R}$, then which of the following is correct option?

Select the correct option

●	The set of limit points of $\mathbb{Q}$ is open.
○	The set of limit points of $\mathbb{Q}$ is closed.
○	The set of limit points of $\mathbb{Q}$ is an empty set.
○	None of them.

MC180201270: YASIR FAROOQ

Time Left 86 sec(s)

MTH641:Grand Quiz

Quiz Start Time: 12:19 PM, 08 July 2020

Question # 16 of 30 (Start time: 12:39:27 PM, 08 July 2020) Total Marks: 1

$\mathbb{R}^n$ is

Select the correct option

Reload Math Equations

- Euclidean space and complete.
- Euclidean space and incomplete.
- Unitary space and complete.
- Unitary space and incomplete.

Click to Save Answer & Move to Next Question

Question # 2 of 30 (Start time: 01:01:50 PM, 08 July 2020)

Let X be a metric space and Y is a closed subset of X such that the distance between any two points in Y is at most 1. Then____

Select the correct option

○	Y is compact
○	any continuous function from $Y \to \mathbb{R}$ is bounded
○	Y is not an open subset of X
○	None of them

MTH641:Grand Quiz

Question # 18 of 30 (Start time: 04:52:42 PM, 08 July 202

$\|x + y\|$

Select the correct option

●	$\leqslant \|x\| + \|y\|$
○	$\geqslant \|x\| + \|y\|$
○	$= \|x\| + \|y\|$
○	$\leqslant 2\|x\|$

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Apps

MTH641:Grand Quiz — **Quiz Start Time: 01:02 PM, 08 July 2020**

Question # 1 of 30 (Start time: 01:02:35 PM, 08 July 2020) — **Total Marks:** 1

The set A of all limit points of A is called_____

Select the correct option

Reload Math Equations

- open.
- Closure of A.
- compact
- None of them

Click to Save Answer & Move to Next Question

Type here to search

ENG 1:01 PM 7/8/2020

MC180405026: SYED AHSAN ALI

Time Left 82 sec(s)

MTH641:Grand Quiz

Quiz Start Time: 04:38 PM, 08 July 2020

Question # 17 of 30 (Start time: 04:51:05 PM, 08 July 2020)

Total Marks: 1

If $(\mathbb{R}, d)$ be a usual metric space, and $A = \{1, 2, 3\} \subseteq \mathbb{R}$ then which of the following is a correct choice about A?

Select the correct option

Reload Math Equations

- (●) Its interior point is 1.
- ( ) Its interior point is 2.
- ( ) Both 1 and 2 are its interior points.
- ( ) None of its point is an interior point.

Click to Save Answer & Move to Next Question

MC180405026: SYED AHSAN ALI

Time Left 80 sec(s)

MTH641:Grand Quiz

Quiz Start Time: 04:38 PM, 08 July 2020

Question # 12 of 30 (Start time: 04:45:49 PM, 08 July 2020)

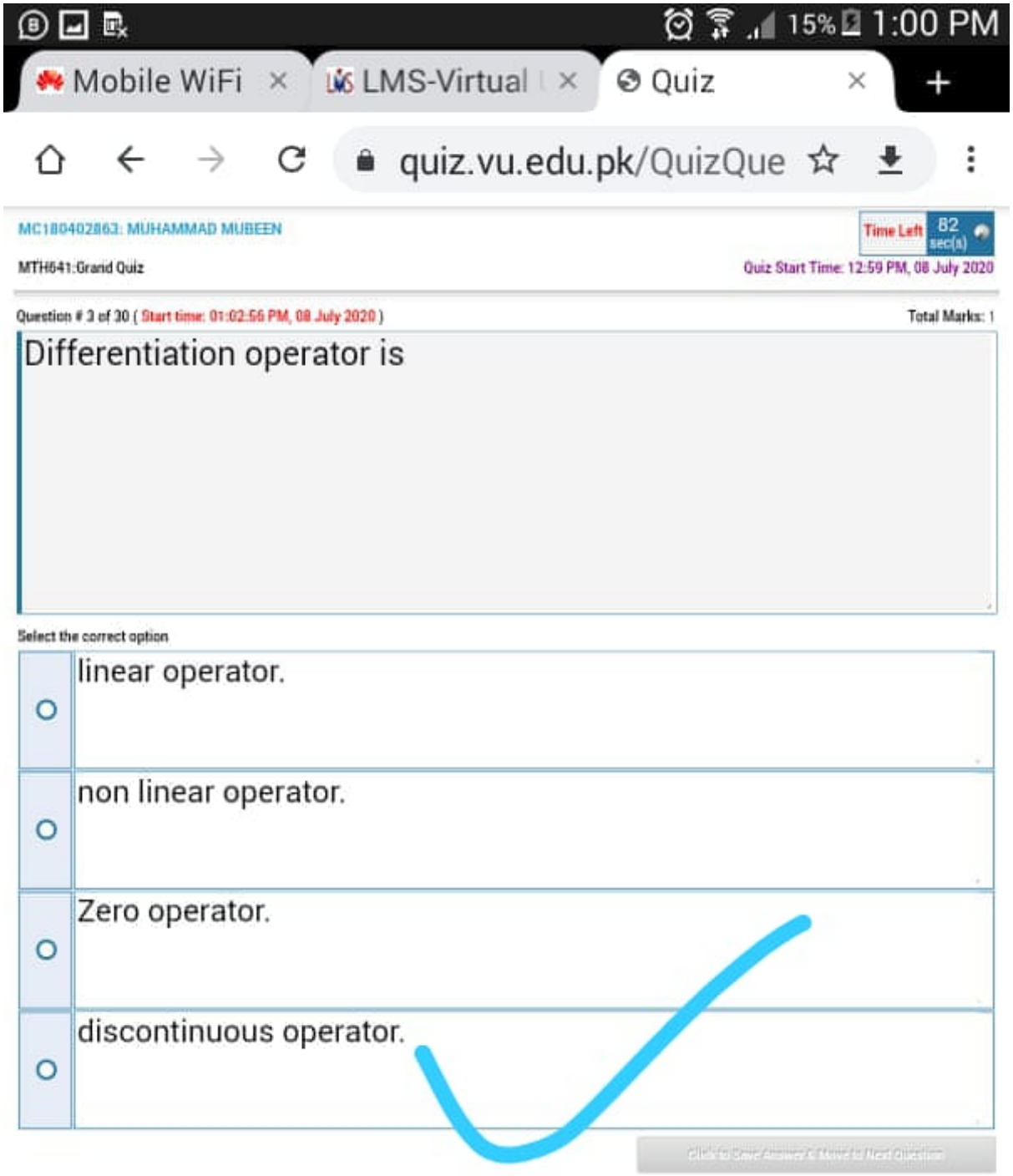
Total Marks: 1

There is no set with an uncountable number of isolated points.

Select the correct option

- (●) True
- ( ) False

Click to Save Answer & Move to Next Question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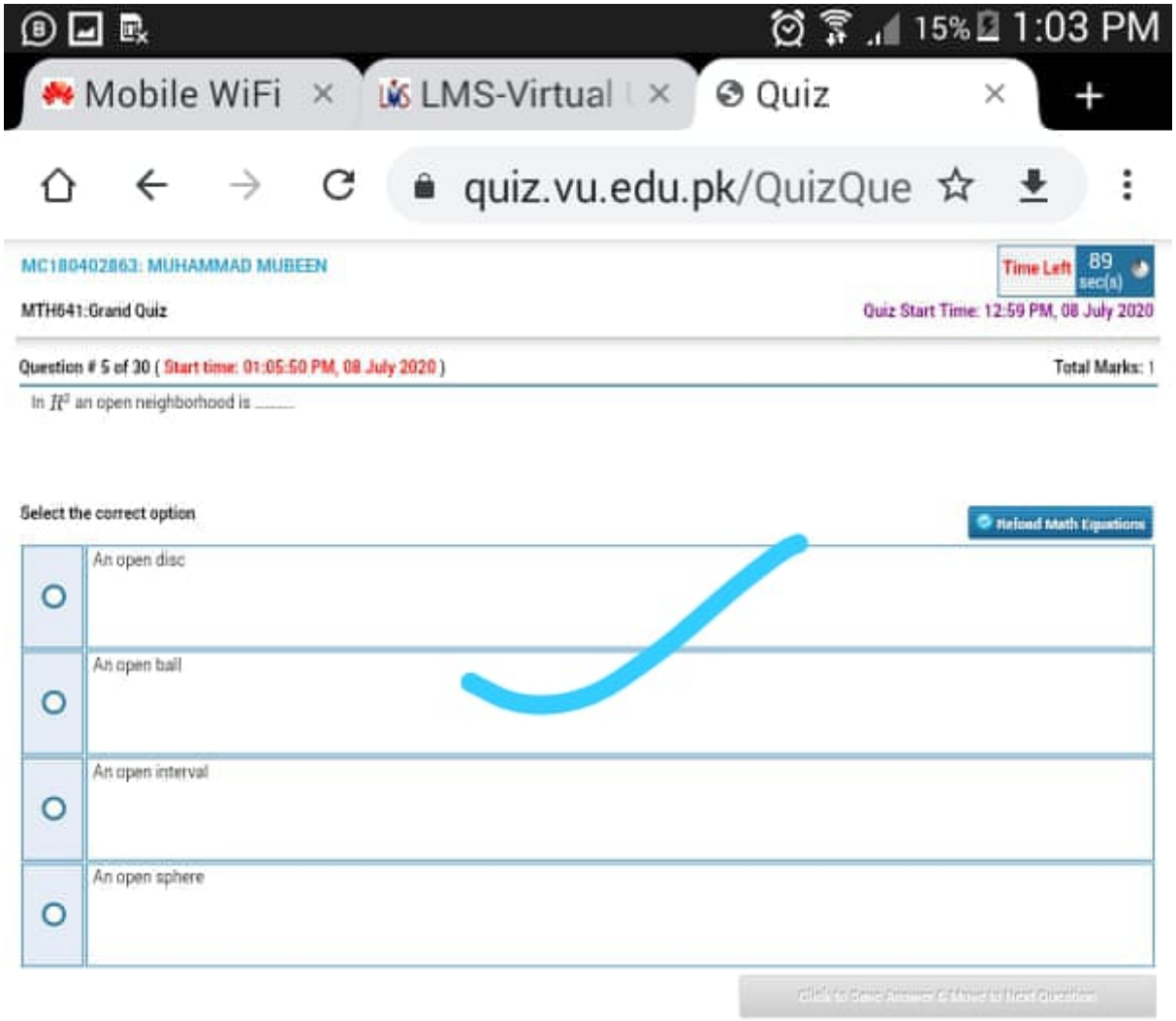
MTH641:Grand Quiz
Quiz Start Time: 12:59 PM, 08 July 2020
Question # 3 of 30 (Start time: 01:02:56 PM, 08 July 2020)
Total Marks: 1
Differentiation operator is
Select the correct option
linear operator.
non linear operator.
Zero operator.
discontinuous operator.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MC180402863: MUHAMMAD MUBEEN
Time Left 89 sec(s)
MTH641:Grand Quiz
Quiz Start Time: 12:59 PM, 08 July 2020
Question # 5 of 30 (Start time: 01:05:50 PM, 08 July 2020)
Total Marks: 1
In R^2 an open neighborhood is .....
Select the correct option
Reload Math Equations
An open disc
An open ball
An open interval
An open sphere

MC180405026: SYED AHSAN ALI

Time Left 85 sec(s)

MTH641:Grand Quiz

Quiz Start Time: 04:38 PM, 08 July 2020

Question # 2 of 30 (Start time: 04:38:53 PM, 08 July 2020)

Total Marks: 1

Let $(\mathbb{R}, d)$ be a usual metric space, then the interior points of the set $A = (-3, 3)$?

Select the correct option

Reload Math Equations

- 1,2
- 2,3
- 2,8
- All of them

Click to Save Answer & Move to Next Question

Question # 7 of 30 (Start time: 01:07:21 PM, 08 July 2020)

A subspace Y of Banach space X is complete iff Y is

Select the correct option

- Open in X.
- closed in X.
- complete.
- dense in X.

MC180402863: MUHAMMAD MUBEEN

Time Left 89 sec(s)

MTH641:Grand Quiz

Quiz Start Time: 12:59 PM, 08 July 2020

Question # 6 of 30 (Start time: 01:07:24 PM, 08 July 2020) Total Marks: 1

Let (R, d) be a usual metric space and $Z \subseteq R$, then which of the following is correct option?

Select the correct option

Reload Math Equations

- Z has finite limit points.
- Z has infinite limit points.
- Z has no limit point.
- None of them.

Click to Save Answer & Move to Next Question

MC180201270: YASIR FAROOQ

Time Left 89 sec(s)

MTH641:Grand Quiz

Quiz Start Time: 12:19 PM, 08 July 2020

Question # 9 of 30 (Start time: 12:29:06 PM, 08 July 2020)

Total Marks: 1

A nonempty set with no isolated point must be a closed set.

Select the correct option

- True
- False

MC180201270: YASIR FAROOQ

Time Left 82 sec(s)

MTH641:Grand Quiz

Quiz Start Time: 12:19 PM, 08 July 2020

Question # 17 of 30 (Start time: 12:41:20 PM, 08 July 2020)

Total Marks: 1

Every normed space is a

Select the correct option

- Metric space.
- Banach space.
- Null space.
- Vector space with a metric defined by norm.

MC180404530: MUHAMMAD ASIF

Time Left 90 sec(s)

MTH641:Grand Quiz

Quiz Start Time: 02:19 PM, 08 July 2020

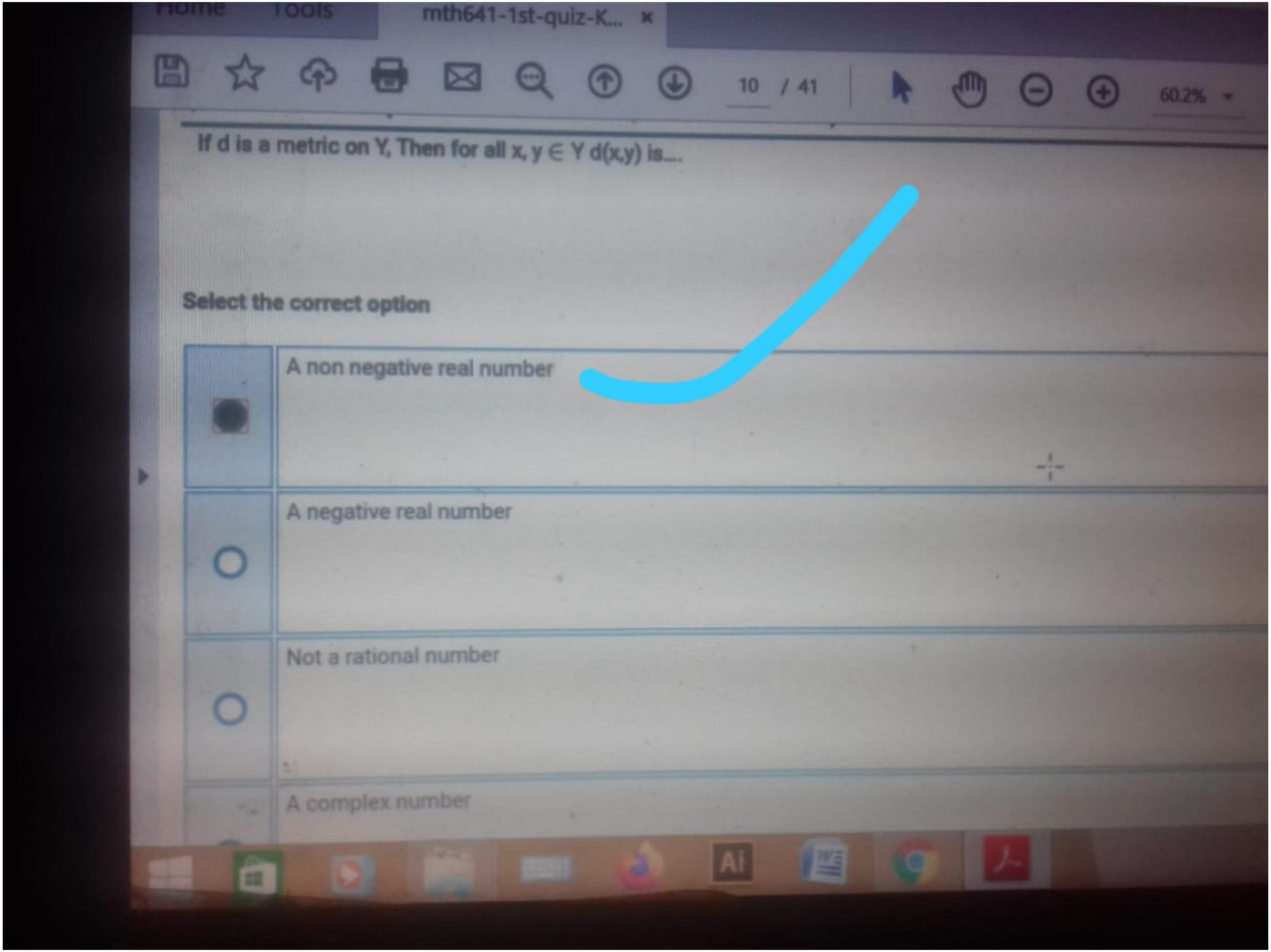
Question # 1 of 30 (Start time: 02:19:25 PM, 08 July 2020)

Total Marks: 1

A mapping from a normed space into a normed space is called

Select the correct option

- operator.
- functional.
- continuous mapping.
- norm.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If d is a metric on Y, Then for all x, y ∈ Y d(x,y) is....
Select the correct option
A non negative real number
A negative real number
Not a rational number
A complex number

Question # 6 of 30 (Start time: 02:24:59 PM, 08 July 2020)

Norm $||x||$ is the distance from x to

Select the correct option

○	0
○	1
○	x itself.
○	an arbitrary point.

MC180404530: MUHAMMAD ASIF

MTH641:Grand Quiz

Question # 15 of 30 (Start time: 02:32:20 PM, 08 July 2020)

If $(\mathbb{R}, d)$ be a usual metric space and $\mathbb{Z} \subseteq \mathbb{R}$, then which of the following is NOT correct choice about $\mathbb{Z}$?

Select the correct option

○	It is not a neighbourhood of any of its point.
○	Neither of its point is an interior point.
○	It must be an open set.
○	None of them.

MC180404530: MUHAMMAD ASIF

MTH641:Grand Quiz

Question # 21 of 30 (Start time: 02:37:24 PM, 08 July 2020)

The set of interior points of $\mathbb{Z}$ is____.

Select the correct option

- $\mathbb{Z}$
- $\mathbb{N}$
- $\mathbb{R}$
- $\emptyset$

Example 1:

Let x and y be two real points on real line, then

$$d(x,y)=|x-y| \quad ; \qquad x,y\in\mathbb{R}$$

Now we prove all the four properties (axioms) of metric space.

$$d(x,y)=|x-y|$$
$$d(x,y)=|x-z+z-y| \quad ; \quad z\in\mathbb{R}$$
$$d(x,y)\le|x-z|+|z-y|$$
$$=d(x,z)+d(z,y)$$

Euclidean plane $\mathbb{R}^2$

Euclidean space mean that the points are taken from $\mathbb{R}^2$ in ordered pair

Question # 7 of 30 (Start time: 02:54:31 PM, 08 July 2020)

Total Marks: 1

Discrete metric space is

Select the correct option

- incomplete
- complete
- countable
- C[a,b]

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Home Tools mth641-1st-quiz-K... ×

19 / 41 66.7%

If τ is typology on non-empty set X, then ..... intersection of member of belong to τ

Select the correct option

- ○ infinite
- ● finite
- ○ arbitrary
- ○ none of these

17.78 x 11.11 in

we have already proved that every finite dimensional subspace is complete and we also know that a subspace is complete if and only if it is closed.

Theorem

Every finite dimensional subspace Y of a normed space X is closed in X. This result is true for finite dimensional subspace but for infinite space it is not true.

Infinite dimensional subspaces are like C[0,1], l^2 are infinite dimensional normed space which are not closed space. We use dense, limit points to prove this.

MODULE NO. 48

NORMED SPACES

- ***Theorem (Equivalent Norms)***

MC170401070: ABDUL RAUF BODLA

Time Left 86 sec(s)

MTH641:Grand Quiz

Quiz Start Time: 02:48 PM, 08 July 2020

Question # 2 of 30 (Start time: 02:48:50 PM, 08 July 2020)

Total Marks: 1

C[a,b] is

Select the correct option

- Finite dimensional.
- Infinite dimensional.
- Not a vector space.
- zero vector space

Question # 1 of 30 (Start time: 02:48:16 PM, 08 July 2020)

Total Marks:

Let E be a subset of a metric space (X, d). We say that E is compact if and only if_____.

Select the correct option

Reload Math Equations

○	every Cauchy sequence in E, converges in E
○	every sequence in E has a subsequence which converges in E
○	every sequence in E has a subsequence which converges in X
○	every convergent sequence in E is Cauchy

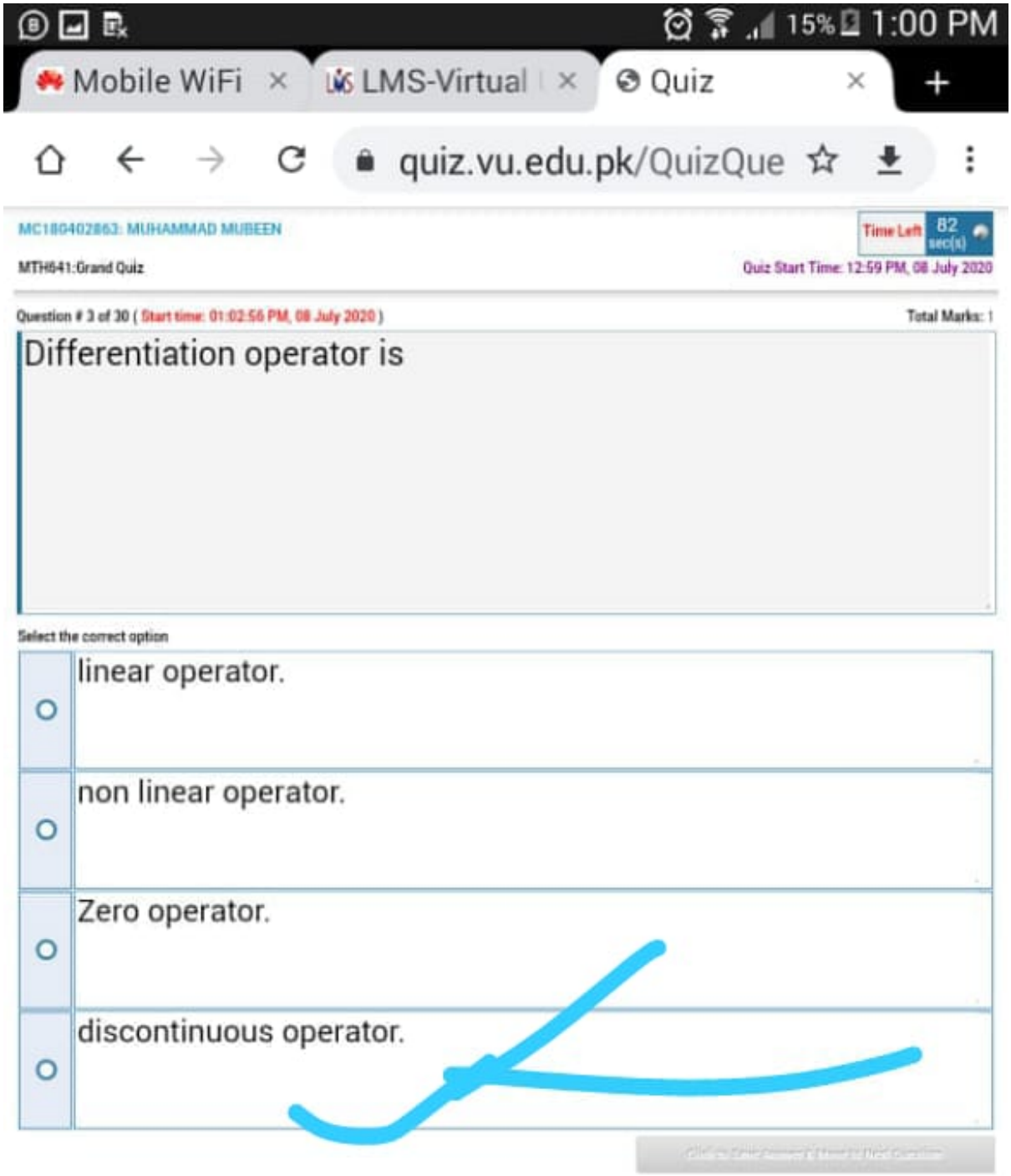
MTH641:Grand Quiz

Question # 27 of 30 (Start time: 02:43:47 PM, 08 July 2020)

For a metric space (X, d), the property $d(x, y) = d(y, x), \forall x, y \in X$ is called ---property.

Select the correct option

○	Non negativity
○	Reflexive
○	Symmetric
○	None of them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MC180402863: MUHAMMAD MUBEEN
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MTH641:Grand Quiz
Quiz Start Time: 12:59 PM, 08 July 2020
Question # 3 of 30 (Start time: 01:02:56 PM, 08 July 2020)
Total Marks: 1
Differentiation operator is
Select the correct option
linear operator.
non linear operator.
Zero operator.
discontinuous operator.

MC180404530: MUHAMMAD ASIF

MTH641:Grand Quiz

Question # 23 of 30 (Start time: 02:39:57 PM, 08 July 2020)

$||x + y||$

Select the correct option

- $\leqslant ||x|| + ||y||$
- $\geqslant ||x|| + ||y||$
- $= ||x|| + ||y||$
- $\leqslant 2\,||x||$

MC180404530: MUHAMMAD ASIF

Time Left 88 sec(s)

MTH641:Grand Quiz

Quiz Start Time: 02:19 PM, 08 July 2020

Question # 24 of 30 (Start time: 02:40:36 PM, 08 July 2020)

Total Marks: 1

If $(\mathbb{R}, d)$ be a usual metric space, then both 3.2 and 1 are the interior points of the set $A = (-3, 3)$.

Select the correct option

Reload Math Equations

- True
- False

MC180404530: MUHAMMAD ASIF

Time Left 86 sec(s)

MTH641:Grand Quiz

Quiz Start Time: 02:19 PM, 08 July 2020

Question # 25 of 30 (Start time: 02:41:44 PM, 08 July 2020)

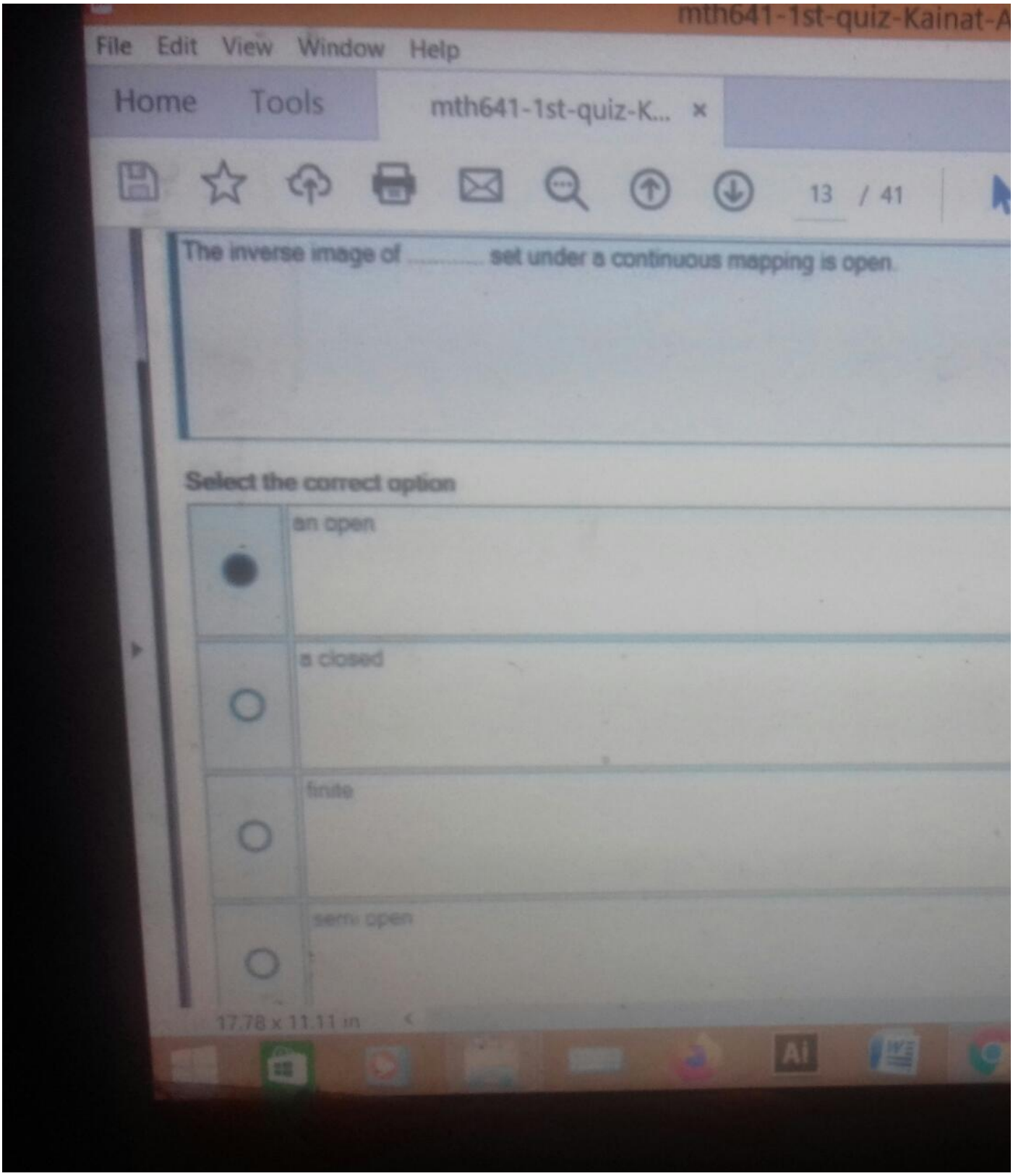
Total Marks: 1

Let $(\mathbb{R}, d)$ be a usual metric space and $A = (2,3) \subseteq \mathbb{R}$, then which of the following is NOT correct option?

Select the correct option

Reload Math Equations

- The set of limit points of A is $[2,3]$.
- The set of limit points of A is $(2,3)$.
- The set of interior points of A is $(2,3)$.
- None of them.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The inverse image of ..... set under a continuous mapping is open.
Select the correct option
an open
a closed
finite
semi open
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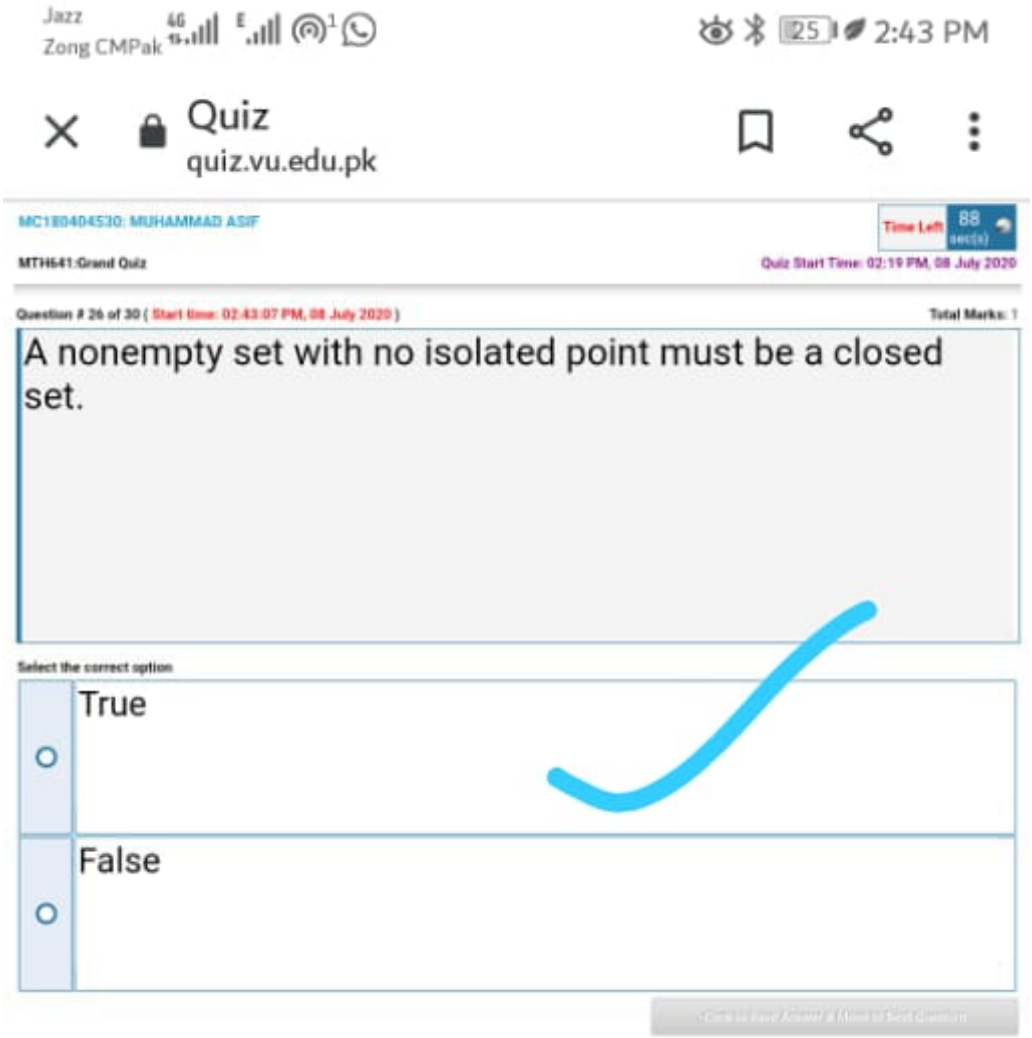
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MC180404530: MUHAMMAD ASIF
Time Left 88 sec(s)
MTH641:Grand Quiz
Quiz Start Time: 02:19 PM, 08 July 2020
Question # 26 of 30 (Start time: 02:43:07 PM, 08 July 2020)
Total Marks: 1
A nonempty set with no isolated point must be a closed set.
Select the correct option
True
False

MC180404530: MUHAMMAD ASIF

Time Left 86 sec(s)

MTH641:Grand Quiz

Quiz Start Time: 02:19 PM, 08 July 2020

Question # 30 of 30 (Start time: 02:46:12 PM, 08 July 2020)

Total Marks: 1

A mapping from a normed space into a scalar field is called

Select the correct option

- operator.
- functional.
- continuous mapping.
- norm.

MC170401070: ABDUL RAUF BODLA

Time Left 87 sec(s)

MTH641:Grand Quiz

Quiz Start Time: 02:48 PM, 08 July 2020

Question # 1 of 30 (Start time: 02:48:02 PM, 08 July 2020)

Total Marks: 1

The usual metric $d(x, y) = |x - y|$ must be defined on——

Select the correct option

Reload Math Equations

- $\mathbb{R}$
- $\mathbb{R}^2$
- $\mathbb{R}^3$
- $\mathbb{R}^n$

Lock In, Save Answer & Move to Next Question

MTH641:Grand Quiz

Question # 4 of 30 (Start time: 02:49:42 PM, 08 July 2020)

If $(\mathbb{R}, d)$ be a usual metric space , then $d\,(2, 8)$ = ———

Select the correct option

- $\int_0^2 dx$
- $2 + \int_0^2 2x dx$
- $1 - \int_2^3 dx$
- $\int_0^2 (2x + 1) dx$

MC170401070: ABDUL RAUF BODLA

MTH641:Grand Quiz Quiz Start

Question # 6 of 30 (Start time: 02:50:34 PM, 08 July 2020)

Let $(\mathbb{R}, d)$ be a usual metric space, then which of the following is NOT an interior point of the set $A = (-3, 3]$?

Select the correct option

- 1
- 1.5
- 2
- 3

Click to Save Answer

Question # 6 of 30 (Start time: 02:53:13 PM, 08 July 2020)

Total Marks: 1

In the real line $\mathbb{R}$ with the discrete metric, the rationals $\mathbb{Q}$ are____.

Select the correct option

Reload Math Equations

- open, Closed, Bounded, and Compact
- complete, Connected, Open, and Bounded
- bounded, Closed, Complete, and Open
- closed, Compact, Complete and Connected

➢ *Theorem (Closedness)*

As we have already proved that every finite dimensiona
o know that a subspace is complete if and only if it is clo

eorem

Every finite dimensional subspace Y of a norme d sp
ue for finite dimensional subspace but for infinite s ace

Infinite dimensional subspaces are like C[0,1], a
ce which are not closed space. We use dense, limit p oin

M.C-9

MODULE NO. 4

NORMED SPACES

➢ *Theorem (Equivalent Norms)*

Definition

A norm $\|\cdot\|$ on a vector space X is said to be equiv
positive numbers a and b such that for all $x \in X$ we have

$$a\|x\|_o \leq \|x\| \leq \|x\|_o b$$

This property should hold for every element x of vector
norm).

If we prove about condition then we say that these two n
fine the same topology for X.