

1 # 9 of 10 (Start time: 03:14:44 PM, 29 August 2020)

Total Marks:

vector sum of $\vec{x} = (x_1, x_2, x_3, x_4, x_5, x_6)$ and $\vec{y} = (y_1, y_2, y_3, y_4, y_5, y_6)$ is $\vec{x} + \vec{y} =$ _____.

no correct option

 Reload Math Equations

$(x_1 + y_1 + x_2 + y_2 + \cdots + x_6 + y_6)$

$(x_1 + y_1, x_2 + y_2, \cdots, x_6 + y_6)$

$(x_1 + y_1, x_2 + y_2, \cdots, x_6 + y_6)$

$(x_6 + y_6, x_5 + y_5, \cdots, x_1 + y_1)$

Q # 2 of 10 (Start time: 03:38:46 PM, 29 August 2020)

Total Marks:

If $\vec{x}$ and $\vec{y}$ are in $\mathbb{R}^n$, then _____ is called triangle inequality.

no correct option

[Reload Math Equations](#)

$$|\vec{x} + \vec{y}| \geq |\vec{x}| + |\vec{y}|$$

$$|\vec{x} + \vec{y}| < |\vec{x}| + |\vec{y}|$$

$$|\vec{x} + \vec{y}| \leq |\vec{x}| + |\vec{y}|$$

$$|\vec{x} + \vec{y}| > |\vec{x}| + |\vec{y}|$$

Limit points of set $S = \{(x, y) : -n < x, y < n, (x, y) \neq (0, 0), n \in \mathbb{N}\}$ in $\mathbb{R}^2$, — — —.

is correct option

[Reload Math Equations](#)

$$\{(0, 0)\} \cup \{(x, y) : x, y = \pm n, n \in \mathbb{N}\}$$

not sure

$$\{(0, 0)\} \cup S$$

$$\{(0, 0)\} \cup \{(x, y) : x, y = \pm n, n \in \mathbb{N}\} \cup S$$

$$\{(x, y) : x, y = \pm n, n \in \mathbb{N}\} \cup S$$

If $\vec{x}$ and $\vec{y}$ are in $\mathbb{R}^n$ and a is a scalar, then $(a\vec{x}) \cdot \vec{y} = \underline{\hspace{2cm}}$.

Select the correct option

 Reload Math Equations



$\vec{x} \cdot (a\vec{y})$



$a(\vec{x} \cdot \vec{y})$



both a and b



none of these

qn # 2 of 10 (Start time: 03:40:21 PM, 29 August 2020)

Total Marks: 1

and Y are in $\mathbb{R}^n$, then $|Y - X| = \dots$.

the correct option

 Reload Math Equations

$\geq |Y| - |X|$

$\leq |Y| - |X|$

$\geq |X| - |Y|$

$= |X| - |Y|$

Boundary of the set $\{(x, y) : -n < x, y < n, (x, y) \neq (0, 0), n \in \mathbb{N}\}$ in $\mathbb{R}^2$, is $---$.

has correct option

[Reload Math Equations](#)

$$\{(x, y) \in \mathbb{R}^2 | x = \pm n, y = \pm n, n \in \mathbb{N}\} \cup \{(0, 0)\}$$

$$\{(x, y) \in \mathbb{R}^2 | x = \pm n, y = \pm n, n \in \mathbb{N}\}$$

$$\{(0, 0)\}$$

$$\{(x, y) \in \mathbb{R}^2 | x = \pm n, y = \pm n, n \in \mathbb{N}\} \cap \{(0, 0)\}$$

$X = (-1, 3, -1) + t(2, -4, 0)$, $-\infty < t < \infty$ is the equation of line through $(-1, 3, -1)$ in the direction of vector $(2, -4, 0)$ in $\mathbb{R}^3$, then the line segment on L , when $t = 1$ is - - - - - .

is correct option

[Reload Math Equations](#)

$$X = (1 - t)(-1, 3, -1) + t(2, -4, 0), 0 \leq t \leq 1$$

$$X = t(-1, 3, -1) + (1 - t)(2, -4, 0), 0 \leq t \leq 1$$

$$X = (1 - t)(-1, 3, -1) + t(1, -1, -1), 0 \leq t \leq 1$$

$$X = t(-1, 3, -1) + (1 - t)(1, -1, -1), 0 \leq t \leq 1$$

If X and Y are in $\mathbb{R}^n$, then $|X + Y|^2 = \dots$.

Select the correct option

 Reload Math Equations



$$|X|^2 + 2|X||Y| + |Y|^2$$



$$(|X| + |Y|)^2$$



$$|X|^2 + 2(X \cdot Y) + |Y|^2$$



$$X^2 + 2|X||Y| + Y^2$$

Q # 7 of 10 (Start time: 03:43:26 PM, 29 August 2020)

Total Marks:

points 0 , X , Y and $X + Y$ are joined to form a parallelogram in $\mathbb{R}^n$ of sides $|X|$ and $|Y|$,
then its diagonal is represented by - - - - - .

in correct option

 Reload Math Equations

$|X| + |Y|$

$|X| - |Y|$

$|X + Y|$

$||X| - |Y||$

The length of the vector $\vec{x} = (x_1, x_2, 3, x_4, 5)$ is $|\vec{x}| =$ _____.

Select the correct option

 Reload Math Equations



$$(x_1^2 + x_2^2 + 9 + x_4^2 + 25)$$



$$(x_1^2, x_2^2, 9, x_4^2, 25)^{\frac{1}{2}}$$



$$(x_1^2 + x_2^2 + x_4^2 + 34)^{\frac{1}{2}}$$



$$(x_1^2 + x_2^2 + 3^4 + x_4^5 + 5^6)^{\frac{1}{2}}$$

Q # 8 of 10 (Start time: 03:13:17 PM, 29 August 2020)

Total Marks:

Length of the vector $\vec{x} = (x_1, x_2, 3, x_4, 5)$ is $|\vec{x}| =$ _____.

no correct option

 Reload Math Equations

$$(x_1^2 + x_2^2 + 9 + x_4^2 + 25)$$

$$(x_1^2, x_2^2, 9, x_4^2, 25)^{\frac{1}{2}}$$

$$(x_1^2 + x_2^2 + x_4^2 + 34)^{\frac{1}{2}}$$

$$(x_1^2 + x_2^2 + 3^4 + x_4^5 + 5^6)^{\frac{1}{2}}$$

qn # 4 of 10 (Start time: 03:08:57 PM, 29 August 2020)

Total Marks: 1

and Y are in $\mathbb{R}^n$, then $|Y - X| = \dots$.

the correct option

[Reload Math Equations](#)

$\geq |Y| - |X|$

$\leq |Y| - |X|$

$\geq |X| - |Y|$

$= |X| - |Y|$

Q # 5 of 10 (Start time: 03:10:13 PM, 29 August 2020)

Total Marks:

In R^n and a is a scalar, then $|a\vec{x}|$ _____.

No correct option

[Reload Math Equations](#)

☐ $\leq |a| |\vec{x}|$

☐ $> |a| |\vec{x}|$

☐ $= |a| |\vec{x}|$

☐ $\neq |a| |\vec{x}|$

Question # 10 of 10 (Start time: 03:46:55 PM, 29 August 2020)

Total Marks: 1

If $\vec{x}$ and $\vec{y}$ are in $\mathbb{R}^n$ and a is a scalar, then $(a\vec{x}) \cdot \vec{y} = \underline{\hspace{2cm}}$.

Select the correct option

[Reload Math Equations](#) $\vec{x} \cdot (a\vec{y})$  $a(\vec{x} \cdot \vec{y})$ 

both a and b



none of these

Closure of the set $\{(x, y) : -n < x, y < n, (x, y) \neq (0, 0), n \in \mathbb{N}\}$ in $\mathbb{R}^2$, is - - - -.

Select the correct option

 Reload Math Equations



$$\{(x, y) : -n < x, y < n, n \in \mathbb{N}\}$$



$$\{(x, y) : -n \leq x, y \leq n, n \in \mathbb{N}\}$$



$$\{(x, y) : (x, y) \neq (0, 0)\}$$



$$\{(x, y) : x, y \leq n, (x, y) \neq (0, 0), n \in \mathbb{N}\}$$

If X and Y are in $\mathbb{R}^n$, then $|X - Y| = \dots$.

Select the correct option

 Reload Math Equations



$$\leq \|X\| - \|Y\|$$



$$\leq |X| - |Y|$$



$$\geq \|X\| - \|Y\|$$



$$\leq |Y| - |X|$$

$$sV = tU, s \neq 0 \text{ or } t \neq 0$$

$$V = \alpha U, \alpha \neq 0$$

$$U = \beta V, \beta \neq 0$$

All above are equivalent

Let $\vec{x}$ and $\vec{y}$ are in $\mathbb{R}^n$, then _____ is called triangle inequality.

Choose the correct option

[Reload Math Equations](#)

$$|\vec{x} + \vec{y}| \geq |\vec{x}| + |\vec{y}|$$

$$|\vec{x} + \vec{y}| < |\vec{x}| + |\vec{y}|$$

$$|\vec{x} + \vec{y}| \leq |\vec{x}| + |\vec{y}|$$

$$|\vec{x} + \vec{y}| > |\vec{x}| + |\vec{y}|$$

Qn # 5 of 10 (Start time: 03:52:15 PM, 29 August 2020)

Total Marks: 1

The points 0 , X , Y and $X + Y$ are joined to form a parallelogram in $\mathbb{R}^3$ of sides $|X|$ and $|Y|$,
then its diagonal is represented by - - - - - .

The correct option

[Reload Math Equations](#)

$|X| + |Y|$

$|X| - |Y|$

$|X + Y|$

$||X| - |Y||$

The ε - neighborhood at X_0 in $\mathbb{R}^n$ is the set points of the sphere of radius ε and center at X_0 .

is correct option

 Reload Math Equations

inside and on the boundary

only on the boundary

only inside

inside or on the boundary

☐	$ X ^2 + 2(X, Y) + Y ^2$
☐	$ X ^2 - Y ^2 $
☐	$ X - Y ^2$
☒	$ X ^2 + 2 X Y + Y ^2$

The ε - neighborhood at X_0 in $\mathbb{R}^n$ is the set points of the sphere of radius ε and center at X_0 .

is correct option

 Reload Math Equations

inside and on the boundary

not sure

only on the boundary

only inside

inside or on the boundary

If X and Y are in $\mathbb{R}^n$, then $|X - Y| = \dots$.

Select the correct option

 Reload Math Equations



$$\leq \|X\| - \|Y\|$$



$$\leq |X| - |Y|$$



$$\geq \|X\| - \|Y\|$$



$$\leq |Y| - |X|$$

qn # 10 of 10 (Start time: 03:53:32 PM, 29 August 2020)

Total Marks: 1

is a point in $\mathbb{R}^n$ and r is a positive number, the open n -ball of radius r about X_0 is the set $B_r(X_0) = \{X \mid |X - X_0| \text{ ——— } \}$.

the correct option

 Reload Math Equations

$\leq r$

$< r$

$\geq r$

$> r$

☐	$ X ^2 + 2(X, Y) + Y ^2$
☐	$ X ^2 - Y ^2 $
☐	$ X - Y ^2$
☒	$ X ^2 + 2 X Y + Y ^2$

☐	open
☐	closed
☒	neither open nor closed
☐	both open or closed

Question # 7 of 10 (Start time: 03:52:52 PM, 29 August 2020)

Total Marks: 1

If $\vec{x}$ is in $\mathbb{R}^n$ and a is a scalar, then $|a\vec{x}|$ _____.

Select the correct option

Reload Math Equations

☐

$\leq |a| |\vec{x}|$

☐

$> |a| |\vec{x}|$

☒

$= |a| |\vec{x}|$

☐

$\neq |a| |\vec{x}|$

Question # 8 of 10 (Start time: 03:53:03 PM, 29 August 2020)

Total Marks: 1

In R^4 let $\vec{x} = (1, -3, 5, 6)$ and $\vec{y} = (2, -4, 3, \frac{1}{2})$. $\vec{x} + \vec{y} =$ _____.

Select the correct option

[Reload Math Equations](#) $(3, -7, 8, 6.5)$  $(2, -7, 8, 6)$  $(3, 7, 8, 6.5)$  $(3, -7, 8, \frac{7}{2})$

Question # 1 of 10 (Start time: 03:05:52 PM, 29 August 2020)

Total Marks:

If $\vec{x}$ and $\vec{y}$ are in $\mathbb{R}^n$, then _____ is called triangle inequality.

Select the correct option

[Reload Math Equations](#)



$$|\vec{x} + \vec{y}| \geq |\vec{x}| + |\vec{y}|$$



$$|\vec{x} + \vec{y}| < |\vec{x}| + |\vec{y}|$$



$$|\vec{x} + \vec{y}| \leq |\vec{x}| + |\vec{y}|$$



$$|\vec{x} + \vec{y}| > |\vec{x}| + |\vec{y}|$$

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