

Question # 1 of 10 (Start time: 04:49:47 AM, 24 June 2022)

If $y = f(\sin t)$ and $y = t$ then $\left(\frac{df}{dy}\right) = \dots\dots\dots$

Select the correct option



$-\sec y$



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$\sec y$



$\cos y$



$-\cos y$

Click to Save Answer

Derivative of absolute value function:
 $f(x) = \text{Abs}(x) = |x|$ at $x = -2$ is

Select the correct option



zero



-1

www.thundershare.net



does not exist



-2



Click to Save

MTH101:Quiz 1

Question # 3 of 10 (Start time: 04:53:36 AM, 24 June 2022)

If a car travels 150 miles over a straight road in 3 hours, then its average velocity during the trip is _____

Select the correct option

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50m/h



60m/h



40m/h



30m/h

Question # 4 of 10 (Start time: 04:54:49 AM, 24 June 2022)

If $f(x) = 5x$, then $f'(2)$ is.....

Select the correct option

www.thundershare.net

2



4



8



9

8 Is correct

Question # 5 of 10 (Start time: 04:56:27 AM, 24 June 2022)

If $y = \sec(3x - 4)$ then its derivative by chain rule is

Select the correct option

- | | |
|----------------------------------|---|
| ☐ | www.thundershare.net
$-3 \sec(3x - 4) \tan(3x - 4).$ |
| ☐ | $\sec(3x - 4) \tan(3x - 4).$ |
| ☒ | $\tan(3x - 4).3$ |
| ☐ | $\sec(3x - 4) \tan(3x - 4).3$ |

Correct option is d

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Question # 6 of 10 (Start time: 04:58:40 AM, 24 June 2022)

Graphically the function $y=c$ represents _____ line.

Select the correct option

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Vertical



Horizontal



MTH101: Quiz 1

Question # 7 of 10 (Start time: 05:00:33 AM, 24 June 2022)

If $f(x) = \sqrt{x}$ and $g(x) = 4\sqrt{x}$, then the derivative of $f(x) \times g(x)$ is

Select the correct option

- | | | |
|-----------------------|---------------|--|
| ☐ | -4 | www.thundershare.net |
| ☐ | | x^2 |
| ☐ | 4 | |
| ☐ | None of these | |

If $f(x) = x^2 + 2x + 3$, then which of the following is true about it.
NOTE:- where x^n denotes the n th power of x .

Select the correct option



Its derivative will be equal to $2x + 1$.



Its derivative will be equal to $2x + 2$

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Its derivative will be equal to $2x + 2 + 1$.



None of these.

Question # 9 of 10 (Start time: 05:04:18 AM, 24 June 2022)

$h(t) = \cos(t + 1)$ is a composition of two functions, one is $\cos t$ and second is

Select the correct option

- | | |
|----------------------------------|---|
| ☐ | 0 |
| ☐ | www.thundershare.net
t |
| ☐ | $t + 1$ |
| ☒ | 1 |

Click to Save An

Question # 9 of 10 (Start time: 05:04:18 AM, 24 June 2022)

$h(t) = \cos(t + 1)$ is a composition of two functions, one is $\cos t$ and second is

Select the correct option



0



www.thundershare.net

t



$t + 1$



1

Question # 10 of 10 (Start time: 05:06:04 AM, 24 June 2023)

Value of the derivative of $g(x)=8-10\cos x$ at $x=0$ is

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Solutions**

Select the correct option

☐ -10

☐ 10

☐ -8

☐ n

Correct option b

Question # 1 of 10 (Start time: 07:51:00 AM, 24 June 2022)

The derivative of $y=x+\cos x$ can be found by using ____rule

Select the correct option

☐	difference
☐	sum
☐	product
☐	power

Sum

MTH101:Quiz 1

Question # 3 of 10 (Start time: 04:53:36 AM, 24 June 2022)

If a car travels 150 miles over a straight road in 3 hours, then its average velocity is

Select the correct option

☒	50m/h
☐	60m/h
☐	40m/h
☐	30m/h

Question # 2 of 10 (Start time: 07:51:28 AM, 24 June 2022)

If a truck travels 100 miles over a straight road in a 5-hour period, then the average velocity is

Select the correct option

☐	5 miles/hour
☐	12 miles/hour
☒	20 miles/hour
☐	None of these

MTH101:Quiz 1

Question # 4 of 10 (Start time: 04:54:49 AM, 24 June 2022)

If $f(x)=8x$,then $f'(2)$ is.....

▶ Select the correct option

☐	2
☒	4
☐	8

8 is correct answer

Question # 8 of 10 (Start time: 05:02:18 AM, 24 June 2022)

If $f(x) = x^2 + 2x + 3$, then which of the following is true about it.
NOTE:- where x^n denotes the n th power of x .

Select the correct option

☐	Its derivative will be equal to $2x + 1$.
☒	Its derivative will be equal to $2x + 2$
☐	Its derivative will be equal to $2x + 2 + 1$.
☐	None of these.

MTH101:Quiz 1

Question # 6 of 10 (Start time: 04:58:40 AM, 24 June 2022)

Graphically the function $y=c$ represents _____ line.

Select the correct option



Vertical



Horizontal

Question # 9 of 10 (Start time: 07:59:19 AM, 24 June 2022)

The tangent function is defined by $\tan x = \sin x / \cos x$

Select the correct option



False



True

Question # 10 of 10 (Start time: 05:06:04 AM 24 June 2023)

Value of the derivative of $g(x)=8-10\cos x$ at 'x = 0' is-----



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Solutions**

Select the correct option

☐ -10

☐ 10

☐ -8

☐ 0

Correct option b

Derivative of absolute value function:
 $f(x) = \text{Abs}(x) = |x|$ at $x = -2$ is

Select the correct option

☐	zero
☐	-1
☒	does not exist
☐	-2

Question # 1 of 10 (Start time: 07:51:00 AM, 24 June 2022)

The derivative of $y=x+\cos x$ can be found by using ____rule

Select the correct option

☐	difference
☒	sum
☐	product
☐	power

Question # 2 of 10 (Start time: 07:51:28 AM, 24 June 2022)

If a truck travels 100 miles over a straight road in a 5-hour period, then the average velocity of the truck is

Select the correct option

☐	5 miles/hour
☐	12 miles/hour
☒	20 miles/hour
☐	None of these

Question # 1 of 10 (Start time: 07:51:00 AM, 24 June 2022)

The derivative of $y=x\cos x$ can be found by using ____rule

Select the correct option



difference



sum



product



power

By Helping Hands

Question # 2 of 10 (Start time: 07:51:28 AM, 24 June 2022)

If a truck travels 100 miles over a straight road in a 5-hour period, then the average velocity of the truck will be

Select the correct option



5 miles/hour

By Helping Hands



12 miles/hour



20 miles/hour



None of these

Question # 3 of 10 (Start time: 07:53:04 AM, 24 June 2022)

If $f(x) = \sec x^5$ and $g(x) = \tan(2x)$, then the derivative of $f(x) - g(x)$ is _____

Select the correct option



$$5 \sec x^5 \tan x^5 - 2 \sec^2(2x)$$



By Helping Hands

$$\sec(x) + 2 \tan(x).$$



$$\sec x^4 \tan x^4 - 2 \sec^2(2x)$$



$$5x^4 \sec x^5 \tan x^5 - 2 \sec^2(2x) .$$

Question # 5 of 10 (Start time: 07:56:14 AM, 24 June 2022)

If $g(X) = 3x^2$ then $g'(2)$ will be ?

Select the correct option



-12



18



15



12

By Helping Hands

Question # 6 of 10 (Start time: 07:56:36 AM, 24 June 2022)

Which of the following rule will be used to find the derivative of $z \cot z$?

Select the correct option



difference



sum



power



product

By Helping Hands

Question # 8 of 10 (Start time: 07:58:17 AM, 24 June 2022)

If $y = f(u)$ and $u = g(x)$, then $\frac{dy}{dx} = \dots\dots\dots$ (using chain rule).

Select the correct option



$$\left(\frac{du}{dy}\right)\left(\frac{dy}{dx}\right)$$



$$\left(\frac{dy}{du}\right)\left(\frac{du}{dx}\right)$$



$$\left(\frac{dy}{du}\right)\left(\frac{dx}{du}\right)$$



$$\left(\frac{du}{dy}\right)\left(\frac{dx}{du}\right)$$

By Helping Hands

Question # 9 of 10 (Start time: 07:59:19 AM, 24 June 2022)

The tangent function is defined by $\tan x = \sin x / \cos x$

Select the correct option

False



True



By Helping Hands

Question # 10 of 10 (Start time: 07:59:34 AM, 24 June 2022)

π radians corresponds to.....degrees.

Select the correct option



90



180



360



75

By Helping Ha

Average velocity is obtained by dividing the _____



Select the correct option

Total distance by time elapsed

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$$\lim_{x \rightarrow 0^+} \frac{1}{x} =$$

Select the correct option

☐	0
☒	$+\infty$
☐	1

World Of Educ

ϵ (epsilon) used in the definition of limit can be a negative number.



Select the correct option

False

World Of Education

True

To find the slope of tangent line at a particular point along a curve , you have to calculate ____.

Select the correct option

☐

displacement

☐

acceleration

☐

instantaneous velocity

☒

average velocity

World Of Education

Average rate of change in 'y' w.r.t 'x' represents the slope of ____ line on the graph.

Select the correct option



secant



parabola

World Of Education



00:02:42

If $y=x^2$ then average rate of change of y with respect to x over the interval $[1, 2]$ is
NOTE: x^n means ' x ' to the power ' n '

$y =$

Select the correct option



1



2



None of these



3

World Of Education

Is the function $f(x) = \tan(x)$ continuous at $x = \pi$? If not, why?

Select the correct option

☒ f is continuous at $x = \pi$.

World Of Educa

A function $f(x) = x / |x|$ is

Select the correct option

continuous at $x = 1$



World Of Edu

If $(0,0)$ and $(2,2)$ are any two points on a curve then the slope of a line parallel to the secant segment through these points is -----

Select the correct option

- | | |
|----------------------------------|----|
| ☒ | 1 |
| ☐ | -2 |
| ☐ | 2 |
| ☐ | -1 |



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MTH101:Quiz 1

Question # 1 of 10 (Start timer: 05:45:00 AM, 25 June 2022)

If $f(x) = x^2 + 2x + 3$, then which of the following is NOT true about it.
NOTE:- where x^n denotes the n th power of x .

Select the correct option

- | | |
|----------------------------------|---------------------------------|
| ☒ | Its derivative at $x = 2$ is 5. |
| ☐ | Its derivative at $x = 4$ is 5. |
| ☐ | Its derivative at $x = 1$ is 4. |
| ☐ | None of these. |
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Question # 2 of 10 (Start time: 05:46:09 AM, 25 June 2022)

Point slope form of the tangent line is
 $y-3=6(x-3)$
then its standard slope-intercept form is

Select the correct option

☒	$y=6x-15$	Recorded with iTop Screen Recorder
☐	$x-y=15$	
☐	$y-15=6x$	
☐	$6x-y=15$	

Question # 4 of 10 (Start time: 05:48:42 AM, 25 June 2022)

In the interval $[0, +2\pi]$, the minimum value of derivative of $f(x) = \sin x$ exists at $x = \text{---}$ (note: $\pi = 180$ degrees)

Select the correct option

☒	0
☐	π
☐	$\pi/2$
☐	$\pi/4$

Recorded with iTop Screen Recorder

The point slope form of the equation of tangent line at the point (x_1, y_1) is _____.

Select the correct option

☒ $y - y_1 = m(x - x_1)$

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☐ $y = mx + c$

Question # 6 of 10 (Start time: 05:52:03 AM, 25 June 2022)

If $w = \sin x$ and $x = t$ then $\frac{dw}{dt} = \dots\dots\dots$

Select the correct option

 $-\cos t$

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 $-\cos x$  $\cos x$  $\cos t$

Question # 7 of 10 (Start time: 05:53:16 AM, 25 June 2022)

If $f(x) = x \sin(x)$, then which of the following is the derivative of $f(x)$

Select the correct option

- | | |
|----------------------------------|------------------------|
| ☐ | $-x \cos(x) + \sin(x)$ |
| ☐ | None of these |
| ☐ | $x \sin(x) + \cos(x)$ |
| ☒ | $x \cos(x) + \sin(x)$ |
- Recorded with iTop Screen Recon

Question # 8 of 10 (Start time: 05:54:50 AM, 25 June 2022)

If $y=f(x)$ then instantaneous rate of change of y with respect to x at the point x_0 is given by slope of secant line.

Select the correct option

False



True



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MTH101:Quiz 1

Question # 9 of 10 (Start time: 05:56:38 AM, 25 June 2022)

A function ____ be differentiable at the point of discontinuity.

Select the correct option

can



cannot



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MTH101:Quiz 1

Question # 10 of 10 (Start time: 05:58:26 AM, 25 June 2022)

If $y=f(x)$ then instantaneous rate of change of y with respect to x at the point x_0 is given by slope of tangent line at $(x_0, f(x_0))$

Select the correct option

True



False



Recorded with iTop Screen Recorder