

Calculus and Logarithms

Spoken Tutorial Project

<https://spoken-tutorial.org>

National Mission on Education through ICT

<http://sakshat.ac.in>

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Learning Objectives



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We will learn how to:



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We will learn how to:

- ▶ **Write** derivatives **and** differential equations



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- ▶ **Write** integrals



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- ▶ **Write** integrals
- ▶ **Write** formulae **using** logarithms



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- ▶ **Write** derivatives **and** differential equations
- ▶ **Write** integrals
- ▶ **Write** formulae **using** logarithms
- ▶ **Customize the shortcuts**



System Requirements



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This tutorial is recorded using:



System Requirements

This tutorial is recorded using:

▶ **Ubuntu Linux OS version 18.04**



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This tutorial is recorded using:

- ▶ **Ubuntu Linux OS version 18.04**
- ▶ **LibreOffice Suite version 6.3.5**



Prerequisites



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- ▶ **Learner should be familiar with Math interface**



Prerequisites

- ▶ Learner should be familiar with Math interface
- ▶ If not please access the relevant tutorials on this website
<https://spoken-tutorial.org>



Code Files



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- ▶ **The files used in this tutorial are provided in the Code files link**



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- ▶ Please download and extract the files



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- ▶ Make a copy and use them for practising



Assignment



Assignment

- ▶ **Write a markup for the following derivative:**

$$\frac{d^2 y}{dx^2} = \frac{d}{dx} \left(\frac{dy}{dx} \right)$$

- ▶ **Use scalable brackets**



Assignment



Assignment

Write the markup for the following integrals:

- ▶ Integral with limits 0 to 1 of square root of x dx
- ▶ Double integral from T to 2 of $\sin x - 3y^3 + 5$ $dx dy$



Summary

We have learnt how to:

- ▶ **Write** derivatives **and** differential equations
- ▶ **Write** Integrals
- ▶ **Write** formulae **using** logarithms
- ▶ **Customize the shortcuts**



Assignment



Assignment

- ▶ **Write a markup for the following logarithm:**

`log x to the power of p to the
base b is equal to p times log
x to the base b`

- ▶ **Solve log 1024 to the base 2**



About Spoken Tutorial project

- ▶ Watch the video available at https://spoken-tutorial.org/What_is_a_Spoken_Tutorial
- ▶ It summarises the Spoken Tutorial project
- ▶ If you do not have good bandwidth, you can download and watch it



Spoken Tutorial Workshops

The Spoken Tutorial Project Team

- ▶ **Conducts workshops using** spoken tutorials
- ▶ **Gives certificates to those who** pass an online test
- ▶ **For more details, please write to** contact@spoken-tutorial.org



Answers for THIS Spoken Tutorial

- ▶ Questions in THIS Spoken Tutorial?
- ▶ Visit <https://forums.spoken-tutorial.org>
- ▶ Choose the minute and second where you have the question
- ▶ Explain your question briefly
- ▶ The Spoken Tutorial project will ensure an answer

You will have to register to ask questions



Acknowledgements

- ▶ **Spoken Tutorial project is funded by the Ministry of Education, Govt. of India**



About the contributor

- ▶ This tutorial was originally contributed by **DesiCrew Solutions Pvt.Ltd** in 2011
- ▶ www.desicrew.in
- ▶ Thank you for joining



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