

# 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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- ▶ **Write** formulae **using** logarithms
- ▶ **Customize the shortcuts**



# System Requirements



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**This tutorial is recorded using:**



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**This tutorial is recorded using:**

▶ **Ubuntu Linux OS version 18.04**



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



# Prerequisites



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



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- ▶ 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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- ▶ **Make a copy and use them for practising**



# Assignment



# Assignment

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

`d squared y by d x squared is  
equal to d by dx of ( dy by  
dx)`

- ▶ **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  $T$   $2 \sin x - 3 y$  cubed + 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](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](mailto: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](http://www.desicrew.in)**
- ▶ Thank you for joining

