

Spreadsheet View Advanced in Geogebra

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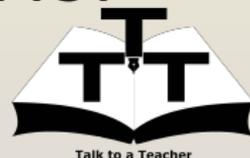
Talk to a Teacher Project

<http://spoken-tutorial.org>

National Mission on Education through ICT

<http://www.sakshat.ac.in>

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Learning Objectives

- ▶ Use the spreadsheet view to



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- ▶ Use the spreadsheet view to
 - ▶ Record X and Y Coordinates of a Point, traced along a function by using a slider



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- ▶ Use the spreadsheet view to
 - ▶ Record X and Y Coordinates of a Point, traced along a function by using a slider
 - ▶ Use the data to recognise number patterns and make predictions about a function graph



System Requirement

- ▶ To start Geogebra



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 - ▶ Ubuntu Version 10.04 LTS



System Requirement

- ▶ **To start Geogebra**
 - ▶ **Ubuntu Version 10.04 LTS**
 - ▶ **Geogebra Version 3.2.40.0**



Linear Equation-Line Through Origin

- ▶ Made a slider 'xValue'



Linear Equation-Line Through Origin

- ▶ **Used the 'Record To Spreadsheet' option**

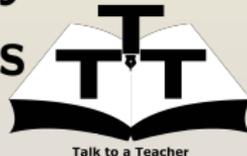


Linear Equation-Line Through Origin

- ▶ **Used the 'Record To Spreadsheet' option**
 1. to record the x and y coordinates of point A

Linear Equation-Line Through Origin

- ▶ **Used the 'Record To Spreadsheet' option**
 1. to record the x and y coordinates of point A
 2. for different 'xValue' values
- ▶ **Predicted an input function by studying the number patterns**



Linear Equation - With Y Intercept

- ▶ Made another slider named b

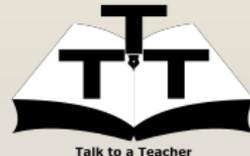


Linear Equation - With Y Intercept

- ▶ Made another slider named b
- ▶ Altered point A coordinates ($xValue, 3 xValue + b$)

Linear Equation - With Y Intercept

- ▶ **Used the 'Record To Spreadsheet' option**



Linear Equation - With Y Intercept

- ▶ **Used the 'Record To Spreadsheet' option**
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Linear Equation - With Y Intercept

- ▶ **Used the 'Record To Spreadsheet' option**
 1. to record the x and y coordinates of point A
 2. for different 'xValue' and 'b' values



Linear Equation - With Y Intercept

- ▶ **Used the 'Record To Spreadsheet' option**
 1. to record the x and y coordinates of point A
 2. for different 'xValue' and 'b' values
- ▶ **Predicted an input function**

$$f(x) = 3x + b$$



Assignment

▶ Tracing a quadratic function



Assignment

- ▶ **Tracing a quadratic function**
 - ▶ **Make sliders 'xValue', 'a'**



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- ▶ **Tracing a quadratic function**
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 - ▶ Plot a point A with coordinates (xValue, a $xValue^2$)

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Assignment

- ▶ **Tracing a quadratic function**
 - ▶ Make sliders 'xValue', 'a'
 - ▶ Plot a point A with coordinates (xValue, a $xValue^2$)
 - ▶ Use the 'Record To Spreadsheet' option to record the x and y coordinates of point A, for different 'xValue' and 'a'
 - ▶ Predict and input

$$f(x) = a x^2$$



Assignment Continued

- ▶ **Tracing quadratic function a $x^2 + bx + 3$**



Assignment Continued

- ▶ **Tracing quadratic function $a x^2 + b x + 3$**
 - ▶ **Make one more slider 'b'**



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Assignment Continued

- ▶ **Tracing quadratic function $a x^2 + b x + 3$**
 - ▶ **Make one more slider 'b'**
 - ▶ **Plot a point A with coordinates $(xValue, a xValue^2 + b xValue + 3)$**



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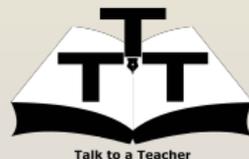
Assignment Continued

- ▶ **Tracing quadratic function $a x^2 + b x + 3$**
 - ▶ **Make one more slider 'b'**
 - ▶ **Plot a point A with coordinates $(xValue, a xValue^2 + b xValue + 3)$**
 - ▶ **Use the 'Record To Spreadsheet' option to record the x and y coordinates of point A, for different 'a' and 'b' value combinations**



Assignment Continued

- ▶ **Tracing quadratic function $a x^2 + b x + 3$**
 - ▶ **Make one more slider 'b'**
 - ▶ **Plot a point A with coordinates $(xValue, a xValue^2 + b xValue + 3)$**
 - ▶ **Use the 'Record To Spreadsheet' option to record the x and y coordinates of point A, for different 'a' and 'b' value combinations**
 - ▶ **Predict and input $f(x) = a x^2 + b x + 3$**



About the Spoken Tutorial Project

- ▶ Watch the video available at http://spoken-tutorial.org/What_is_a_Spoken_Tutorial



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- ▶ If you do not have good bandwidth, you can download and watch it



Spoken Tutorial Workshops

The Spoken Tutorial Project Team



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- ▶ **Conducts workshops using spoken tutorials**



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- ▶ **Conducts workshops using spoken tutorials**
- ▶ **Gives certificates to those who pass an online test**



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- ▶ **For more details, contact**



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Acknowledgements

- ▶ **Spoken Tutorial Project is a part of the Talk to a Teacher project**
- ▶ **It is supported by the National Mission on Education through ICT, MHRD, Government of India**
- ▶ **More information on this Mission is available at:**



<http://spoken-tutorial.org/NMEICT-Intro>



About the contributor

IT for Change, Bengaluru

- ▶ This is Bindu signing off
- ▶ Thank you

