
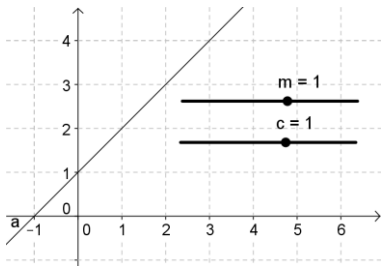



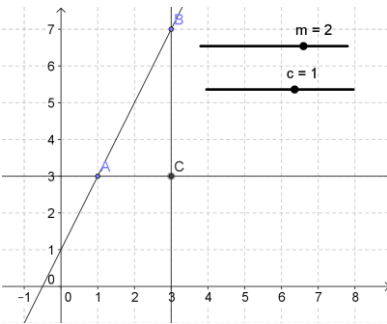

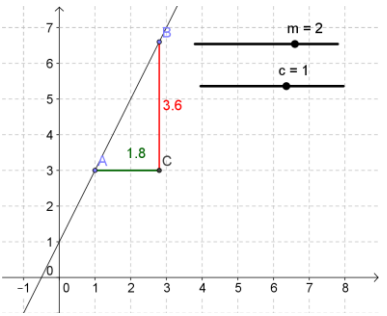

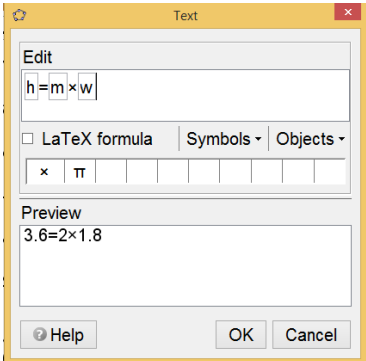


MEI How to Guides for GeoGebra

Generating a dynamic line in the form $y = mx + c$ with a gradient triangle

<p>Adding sliders for m and c, and creating the line</p> <ol style="list-style-type: none"> 1 Add a slider (11th menu) by selecting the slider tool and clicking on the screen. Name it m.  2 Add another slider and name it c. 3 In the input bar type $y=m*x+c$ and press enter. 	
<p>Adding two points on the line and create the gradient triangle</p> <ol style="list-style-type: none"> 4 Add a New Point, A, (2nd menu) on the line (the cursor should change as you hover over the line).  5 Add another New Point on the line, B. 6 Use Perpendicular Line (4th menu) to construct a perpendiculars to the y-axis through A and the x-axis through B.  7 Use Intersect Two Objects (2nd menu) to find the intersection of the perpendicular lines, C.  	
<p>Creating the gradient triangle</p> <ol style="list-style-type: none"> 8 Hide the perpendicular lines: click on the blue circles next to the lines in the Algebra pane. 9 Use Segment to add segments AC and BC.  10 Select each of the segments in turn and use the Graphics Style Bar to change the colour and display the value. 	
<p>Adding the dynamic text (computer software only)</p> <ol style="list-style-type: none"> 11 Rename the segments as them as w and h. This can be done by selecting in the Algebra view and typing the new name. 12 Use Insert Text (10th menu) to add a text-box. Enter $h=m \times w$. w, h and m should be selected from Objects and x can be found in Symbols.  	

<https://tube.geogebra.org/material/show/id/218199>