**Creating mathematical working for finding an angle on a straight line**

1. From the **Options** menu, choose **Labelling** and then choose **New points only**. Then use the **View** menu to hide the coordinate axes and to show the algebra window.



1. Use the **segment tool** to draw a segment. The segment will be labelled AB.
2.  Use the **segment tool** again to draw a new segment that starts on the segment you drew in step 2. This new segment will be labelled CD.
3.  Use the **angle tool** to mark angle DCA. Make sure that you select the vertices in that order (clockwise). Use the same tool to mark angle BCD. Notice that in the algebra window angle DCA is given the pronumeral α and angle BCD is given the pronumeral β.
4.  Change to the **move tool** and drag point D. As you move point D, what is always true about the sum of angle DCA and angle BCD?
5. Right-click on angle DCA and deselect **show object**. This will hide the angle.

***We can now add some mathematical working that could be used to find angle DCA.***

1.  Change to the **text tool** , click somewhere on the white space in the geometry window, then type in the first line of mathematical working:

<ACD + <BCD = 180 (straight angle)

1. Our next line of working will include a pronumeral. Use the text tool again and click on the white space under the first line of mathematical working. Type the following text, including the quotation marks.

"<ACD + " + β + " = 180"

***Remember that* β *refers to angle BCD. Notice that when the text displays on the screen, the value of angle BCD is part of the text.***

1. Here is the final line of mathematical working:

"<ACD = " + α

1.  Change back to the **move tool** and drag point D. The working will adjust to reflect the diagram.