

Open a new Geogebra file. Save the file as “GGB LAB A_Snail Trail Graffiti”

I did not include specific TOOL instructions because I think you have enough experience to know how to use the appropriate tools for this lab construction. Please try tools and use UNDO if you make a mistake... or you may ask.

Part 1:

Construct circle AB with center A. Hide point B.

Construct a new point C on circle A.

Rotate point C about center A by 60 degrees. Image point C' will appear.

Rotate point C' about center A by 60 degrees. Image point C'' will appear.

Construct lines AC, AC' and AC'' (lines not segments) which are all 60 degree rotations of each other, creating 6 regions.

Part 2:

Construct a new point D in one of the six regions.

Hide label D by right clicking on the point and choosing Show Label. If any other labels are showing hide them too.

Change the object properties of D to match the following:

Under Style, change the point size to 7 and the point style to the open circle. Under Color, choose a color.

Part 3:

Use the Reflect Object about Line tool to reflect the colored point in the line that is counterclockwise from this point. Change the Color of this new point to a new color of your choice.

Repeat the last two steps (reflecting and changing the color) until there is a different colored point in each of the six regions.

Part 4:

Add one check box to show-hide the center point A, the points C, C' and C'', the three lines of reflection AC, AC' and AC'', the circle.

Part 5:

Drag your original point D around the screen. If you cannot remember which point is point D you can look at the Algebra window and see what color point D is.

What appears to happen to the other five points when you drag point D around the screen? You do not need to write down this answer.

Part 6:

In the Algebra Window under the POINT section you should see points: D, D', D'', D''', E, and E'.

Highlight point D. Hold the shift key and select point E'. All six points should now be highlighted. (NOTE: on some computers this may not work the same as it does for me, so you may have to do each point one at a time.) Another way to highlight all six points is to do so in the graphics window. If all six points are highlighted, right click in the shaded highlighted region of points and this window will pop up. Select TRACE ON----->

Now drag point D around the screen and make beautiful Snail Trail Graffiti.

Part 7:

When you want to clear a trace to make a new one, you can do this one of three ways.

- 1) You can go to the VIEW menu and choose Refresh Views.
- 2) You can use CTRL-F keyboard shortcut for Refresh Views



- 3) You can use the move graphics screen tool and move the screen.

Part 8:



Have fun and amuse yourself by making Snail Trail Graffiti. When you have a screen that is appealing to your eye, get a screen capture or print screen and post your Snail Trail Graffiti picture on your DP along with a brief explanation of what geometric concepts were involved in creating your picture.