



School:
Name of Student:
Sets:
Further tools: computer
Date:

STUDENT
PUSE Task Number
C
524

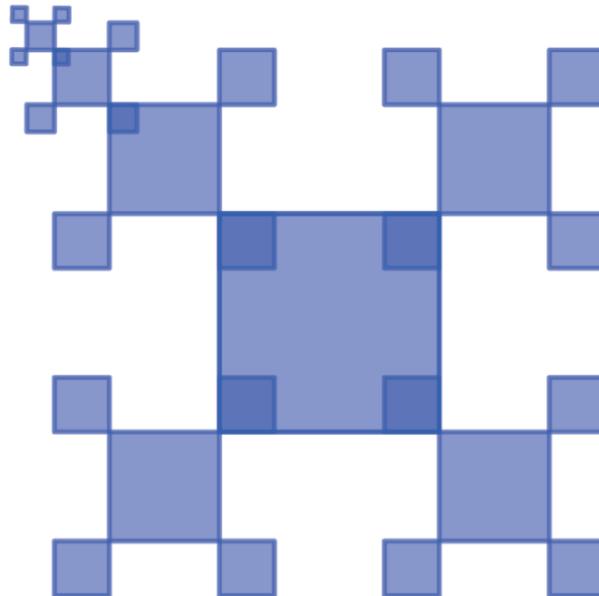
Description of the task:

Construct compositions inspired by the Poly-Universe using GeoGebra. The task sheet shows only one possibility but the idea can be varied at will. Turn on the grid in order to make constructions more precise. First we create a tool. The procedure is as follows:

Draw a square with the help of the regular polygon tool, then by using the “dilate from point” icon reduce the original square at each vertex to half, the scale factor should be -0.5 (the “-” sign is necessary because we would like to draw the smaller squares outside the original square. Naturally, if the scale factor is 0.5 , GeoGebra draws squares inside the original square – this is another possibility.)

Now let’s choose “new tools”, then “create new tool” option from the GeoGebra main menu. A new window will open. Here, choose the four small squares as the output shape, while the input shape should be two vertices of the original square. Now we can name the tool and add an image as its icon.

After that our tool will appear among the icons, let’s choose it and then by clicking on the left and then the right bottom vertex of the square, we’ll get the four small squares joining to the vertices of the square.



Colour the squares of different size with different colours (it’s sufficient to colour the three outward squares). By using a slider or a marker square, try to achieve that the squares of different size appear step by step, one after the other.

Remarks / Self-evaluation: