# Good practices
PROG_252_CD_EN

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Description of the problem / exercise: **Infinite reduction**

Poly-Poly Universe Task: In a triangular element similar to the triangular element of the Poly-Universe, Saxon hid the infinitely scaled-down base shape inside the large one.
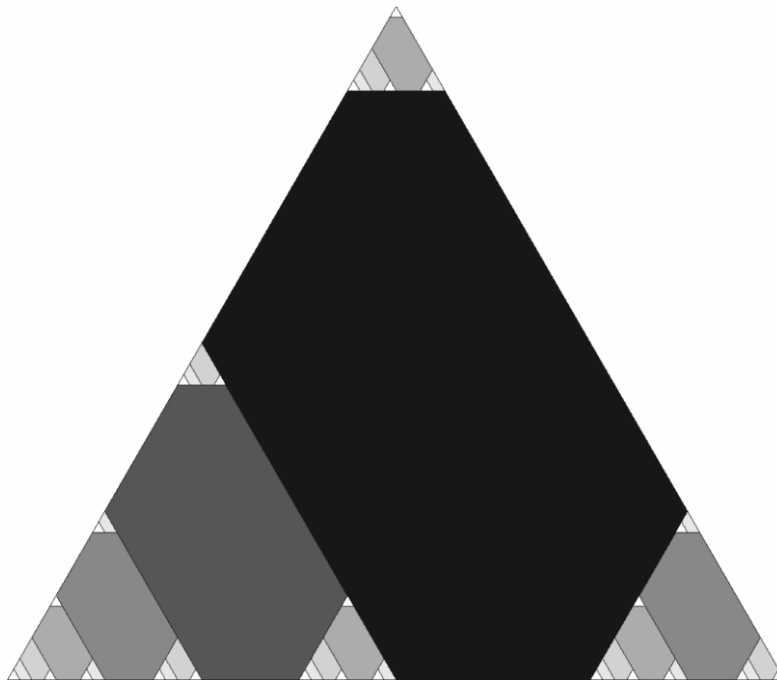
Thanks to the color combination of the Poly-Universe, the game family consists of 24 pieces in each basic form, and all of them has same color proportion:
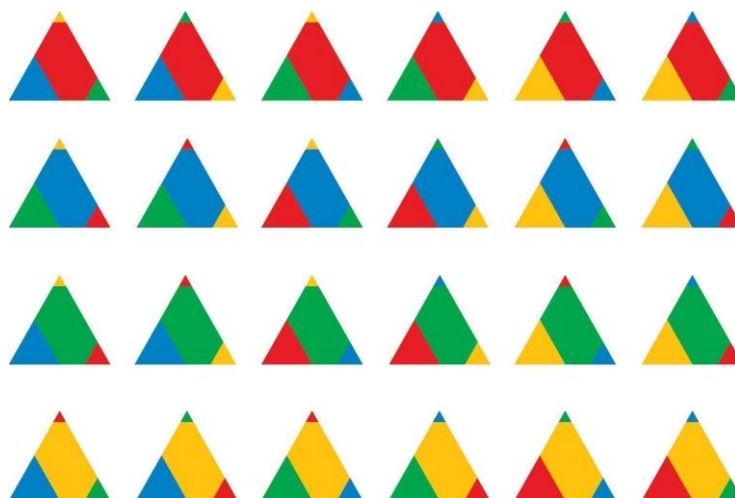
Let's make an attempt to hide all the gradually reduced elements of the element family inside a selected Poly-Universe triangle base element, so that the elements to be hidden are always halved in order to place the smaller elements for full coverage.

The rule according to which the connection is to be made is:

- The base color of the reduced base element must always match the bigger corner shape to which it is being connected.
- The contact color of the corner shapes of the associated base element must not match the color of the receiver forms.

The example below is a possible solution:

Questions that arise:

1. Is there a solution to these rules?
2. How many reductions need to be made so that each element can be placed with the above regularity?
3. How many basic shapes can be placed per reduction?
4. How do the spatial proportions per color evolve in the Poly-Poly Universe thus created?

- *Why this exercise is good:* Develops logical and creative thinking
- L*evel of teacher training:* Subject teacher, secondary school
- *School subject(s):* Creative Art, mathematics, combinatorics, informatics
- *Comments:* We can think of other rules. You need Google Draw or another graphics editor to solve it.