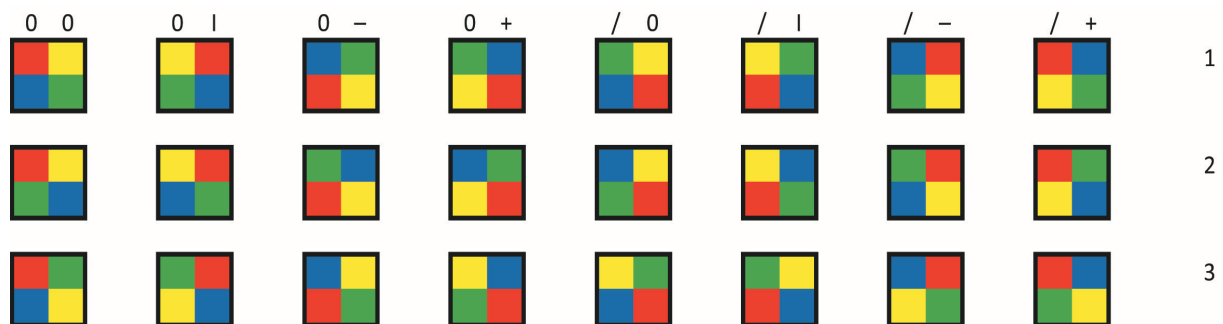




School:
 Name of Student:
 Sets: square
 Further tools: paper, coloured pencil
 Date:

STUDENT
 PUSE Task Number
C
411

Description of the task:



The figure above shows the simplified model of Poly-Universe. The categorization of elements in the rows is the following: if two elements are in two different rows, they cannot be moved onto each other using rotation or reflection. Elements in each row are transformed from the first element applying 1, 2 or 3 reflections.

The signs above the elements indicate the direction of lines of symmetry.

The vertical sign refers to a reflection over the vertical central line of the square, the horizontal sign refers to a reflection over the horizontal central line, and the slash refers to a reflection over the corresponding diagonal. The + sign means two consecutive reflections over the two central lines. Similarly, two signs indicate consecutive reflections over the lines of symmetries of the given directions.

Find elements that are transformed from the first element by rotation. Prove that the two consecutive reflections above the element are equivalent to the given rotation.

How could we simplify the two consecutive reflections above the last element in the rows?

Solution(s) of the task:

Remarks / Self-evaluation: