Grades 5-8 (AS), 9-12 (S)

Duration: 15-25 min

Tools: one Logifaces Set / 2-3 students

Individual work

Keywords: Equilateral triangle, Isosceles triangle

406 - Different Triangles

MATHS / 2D GEOMETRY

LOGIFACES METHODOLOGY

Erasmus+

TEACHER

Logifaces

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DESCRIPTION

LEVEL 1 Students choose a block from the 9 or 16 pcs Set and count the triangular faces.

LEVEL 2 Students consider, name and draw the different triangular faces of block 111 (or 222) and block 122.

LEVEL 3 Students repeat the process outlined in Level 2 for all blocks of the set.

LEVEL 4 Students group the blocks based on their triangular faces.

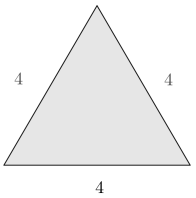
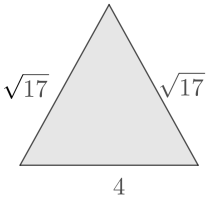
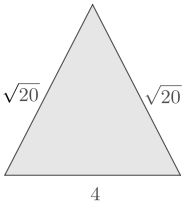
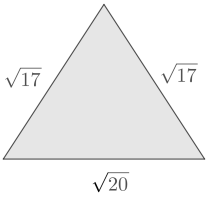
SOLUTIONS / EXAMPLES

LEVEL 1 In every block there are two triangles: the top and base faces.

LEVEL 2 The base faces are all equilateral triangles, the top faces are either equilateral triangles or isosceles triangles.

LEVEL 3 You can find the calculation of the lengths of the upper edges in exercise 2d_geometry_01_04. The top faces of blocks 111, 222 and 333 are equilateral triangles, and the top faces of blocks 112, 113, 221, 223, 331, 332, 123 and 132 are isosceles triangles.

LEVEL 4 The equilateral triangles are congruent. The isosceles top triangles are congruent within the following groups: 112, 221, 223, 332 / 113, 331 / 123, 132

Equilateral triangle Blocks: 111, 222, 333	Isosceles triangle Blocks: 112, 221, 223, 332	Isosceles triangle Blocks: 113, 331	Isosceles triangle Blocks: 123, 132
			

PRIOR KNOWLEDGE

Type of triangles, Congruent triangles

RECOMMENDATIONS / COMMENTS

It is not necessary to know the concept of congruence for the first three levels.
The exercise can be solved without calculations by comparing the edge length of the blocks.
For the calculations, it is recommended to solve exercise 404 - Top Edges before this exercise.