

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

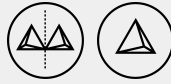
Duration: 15 min

Tools: one Logifaces Set / 1-2 student

Individual / Pair work

Keywords: Symmetry, Planes of symmetry

## 522 - Planes of Symmetry



**MATHS / TRANSFORMATIONS**



LOGIFACES  
METHODOLOGY  
Erasmus+

**TEACHER**  
Logifaces

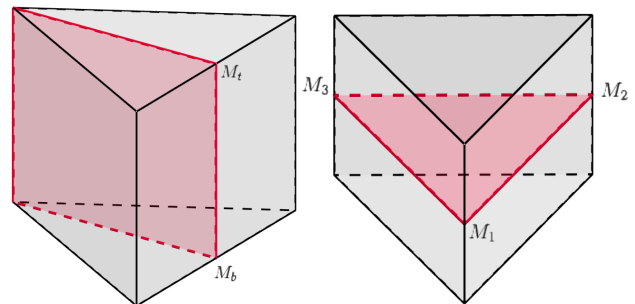
2019-1-HU01-KA201-0612722019-1

### DESCRIPTION

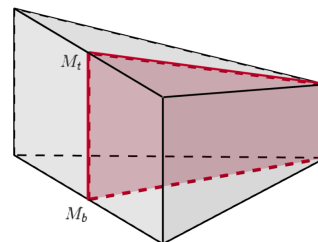
- LEVEL 1** Students choose a Logifaces block and consider the planes of symmetry of it, they discuss the results with their partner or with the whole class. The students should try to specify the plane of symmetry by a few points of the plane that can be described using the parts of the block.
- LEVEL 2** The teacher asks the students to choose a block with a given number of planes of symmetry. The students discuss their choice with their partner or with the whole class.
- LEVEL 3** Students classify the blocks by the number of planes of symmetry. They discuss the connection between the code of the block and the number of planes of symmetry.

### SOLUTIONS / EXAMPLES

Blocks 111, 222 and 333 have 4 planes of symmetry. Three planes of symmetry go through one vertical edge and the midpoints of the two horizontal edges that do not fit on that vertical edge ( $M_b$  and  $M_t$ ). These planes are perpendicular to the base (one of these planes is shown in the left side of the figure). The fourth plane is parallel to the base and goes through the midpoints of the vertical edges ( $M_1$ ,  $M_2$ ,  $M_3$ ) (see the right side of the figure).



Blocks 112, 113, 122, 223, 133, and 233 have one plane of symmetry. It goes through the midpoints of the base and top edges ( $M_b$  and  $M_t$ ) connecting the vertical edges of identical length and through the vertical edge with different lengths.



Blocks 123 and 132 have no planes of symmetry.

### PRIOR KNOWLEDGE

Plane symmetry

### RECOMMENDATIONS/COMMENTS