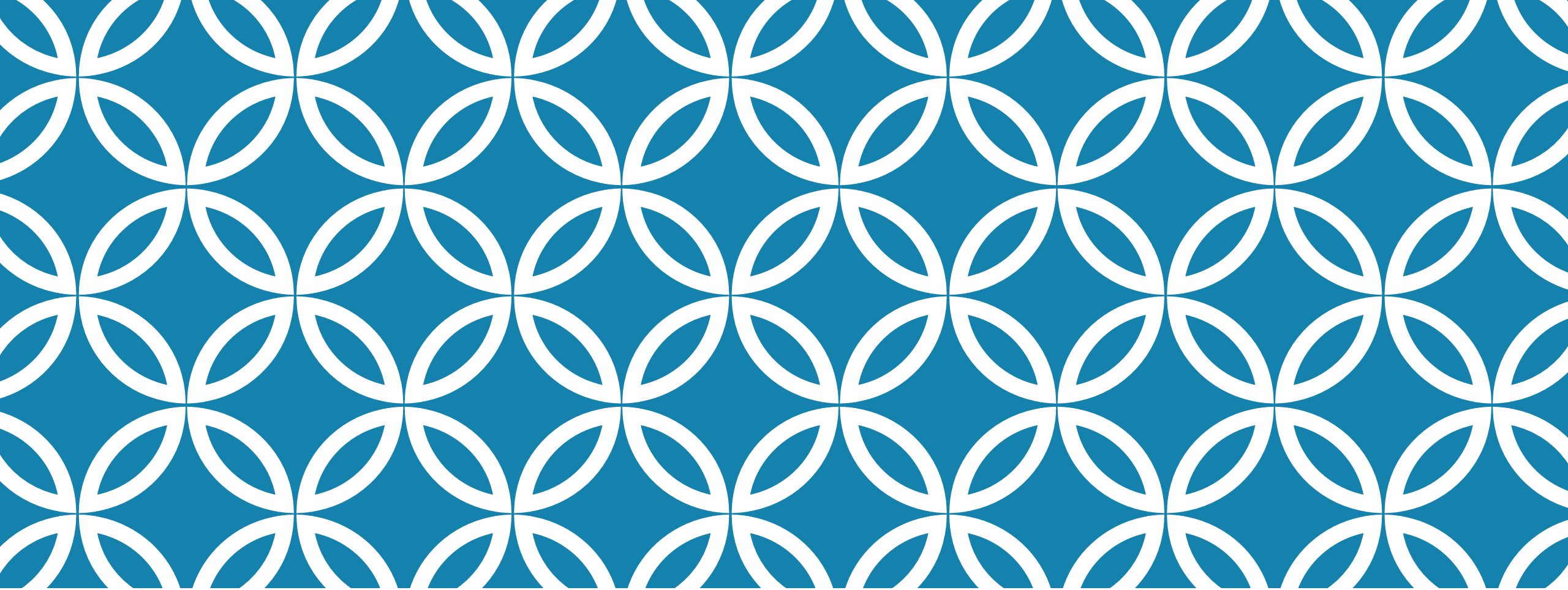


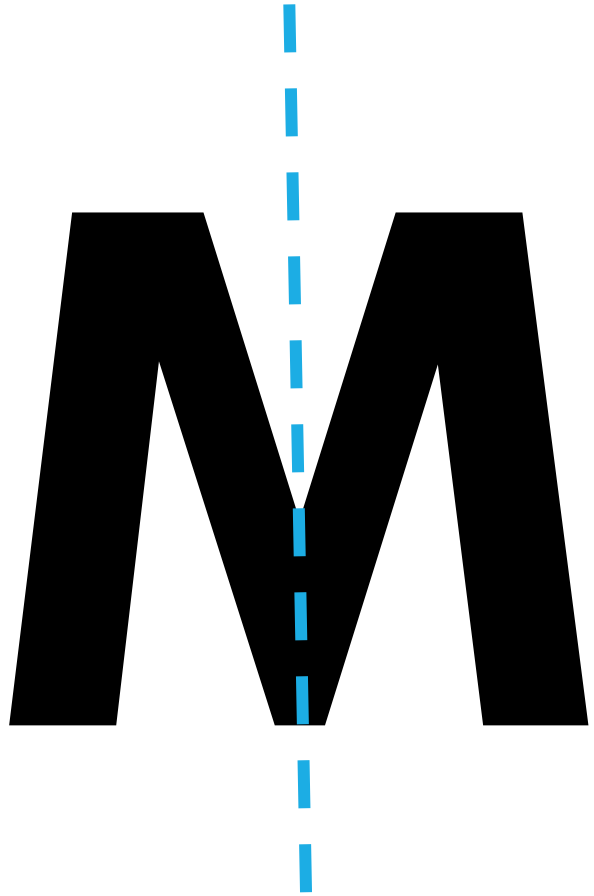
SYMMETRY

TYPES OF SYMMETRY

A figure has ___line___ ___symmetry___ if it can be folded over a line so that one half of the figure matches the other half.

The fold line is called the ___line___ ___of___ ___symmetry___ .

EXAMPLE:

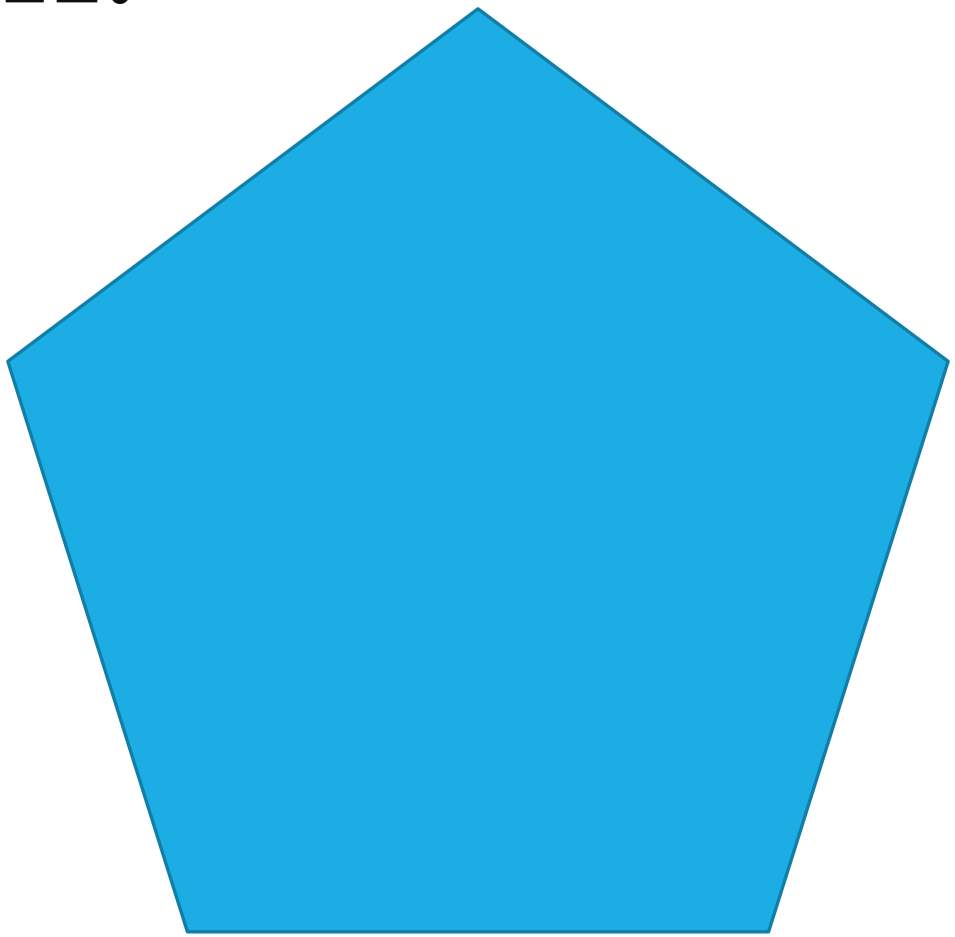


MORE ABOUT LINE SYMMETRY:

A regular polygon is a polygon with all sides equal in length and all angles equal in measure.

If a regular polygon has *n* sides, then it also has *n* lines of symmetry.

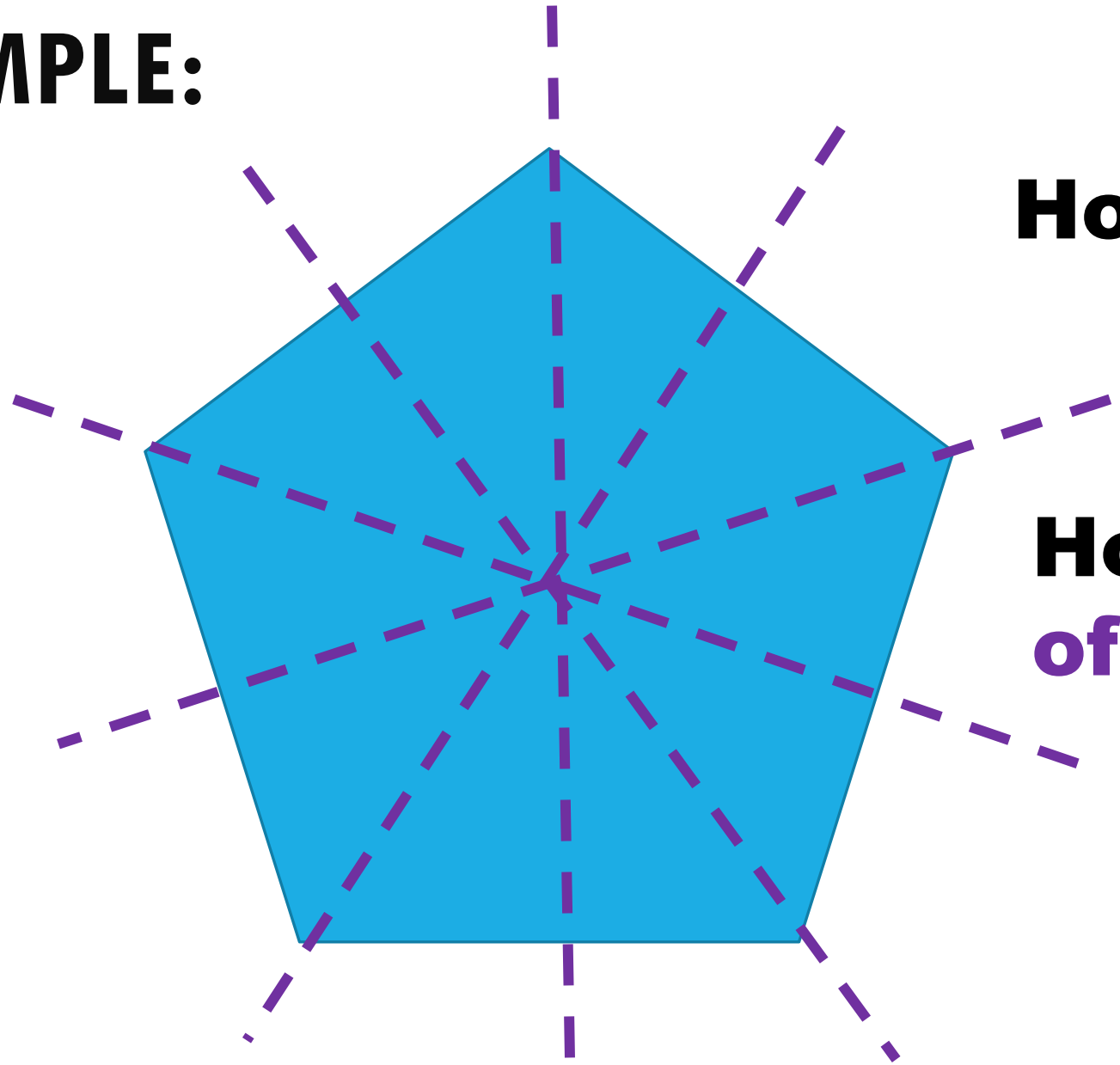
EXAMPLE:



How many sides?

How many lines of symmetry?

EXAMPLE:



How many sides?

5

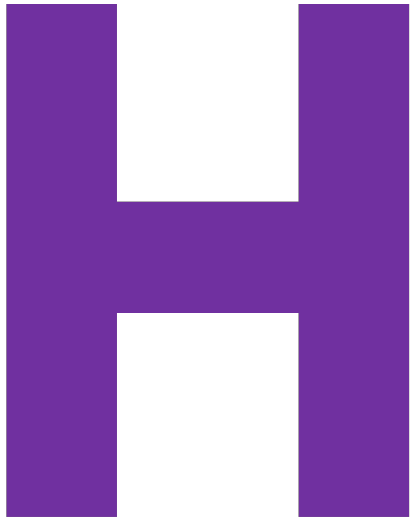
How many lines of symmetry?

5

A figure has rotational symmetry if it can be turned less than 360°about its center so that the figure looks exactly as it does in the original position.

The degree measure of the angle through which the figure is rotated is called the angle of rotation.

EXAMPLE:

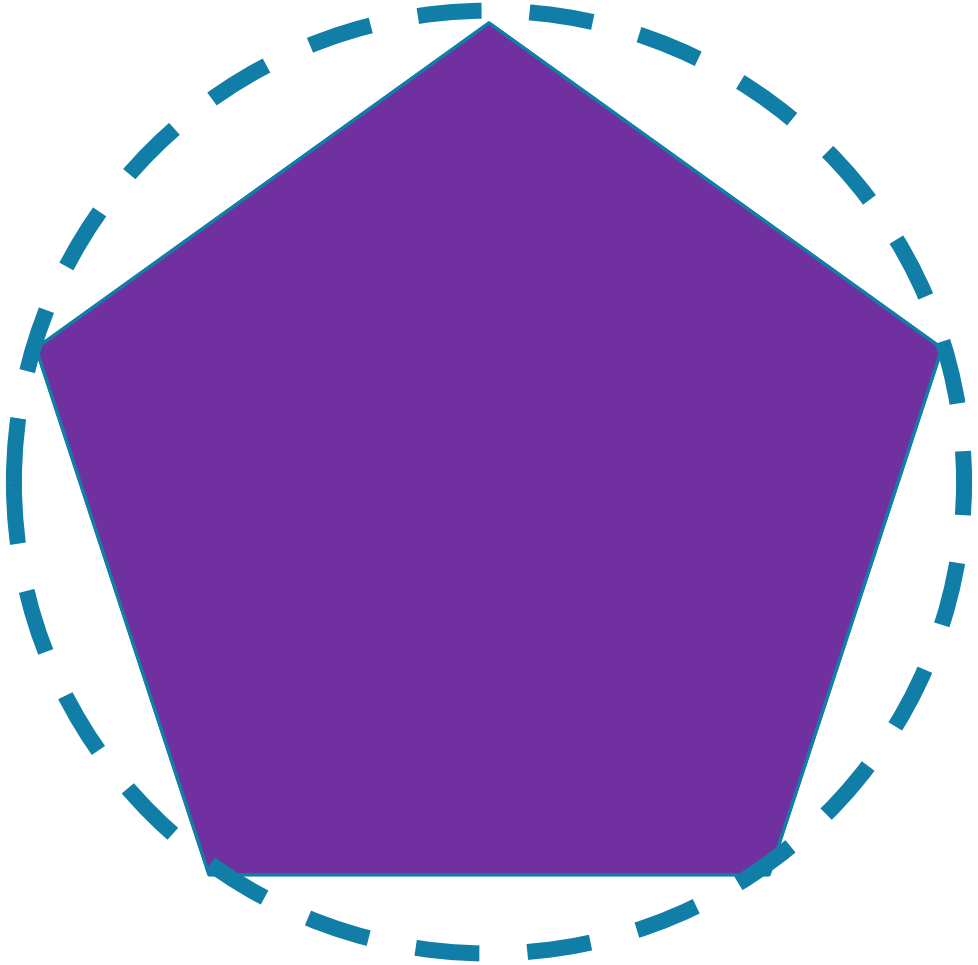


MORE ABOUT ROTATIONAL SYMMETRY:

A figure that has rotational symmetry will map onto itself at least once during a 360° turn.

The number of degrees it takes for a figure to map onto itself is determined by _dividing_ 360° by _n_, the number of sides.

EXAMPLE:



How many times will the figure map onto itself?

5

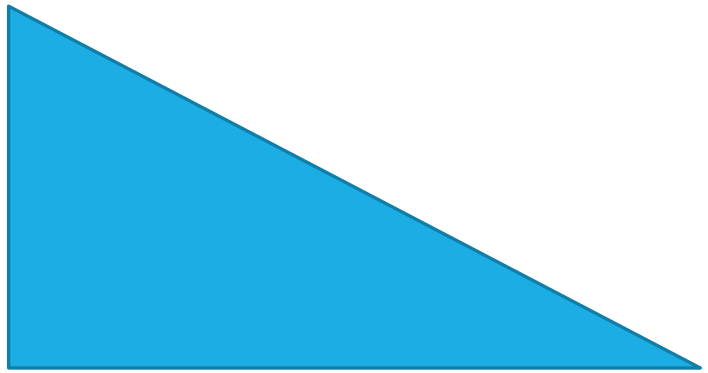
What is the measure of each arc?

$360° / 5 = 72°$

LINE SYMMETRY, ROTATIONAL SYMMETRY, BOTH OR NEITHER?

LINE SYMMETRY

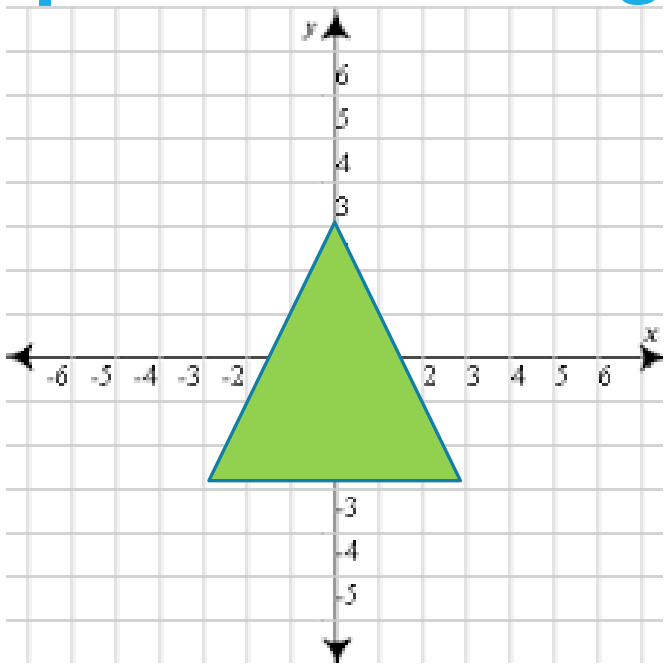
LINE SYMMETRY, ROTATIONAL SYMMETRY, BOTH OR NEITHER?



NEITHER

LINE SYMMETRY, ROTATIONAL SYMMETRY, BOTH OR NEITHER?

Equilateral Triangle



BOTH

LINE SYMMETRY, ROTATIONAL SYMMETRY, BOTH OR NEITHER?

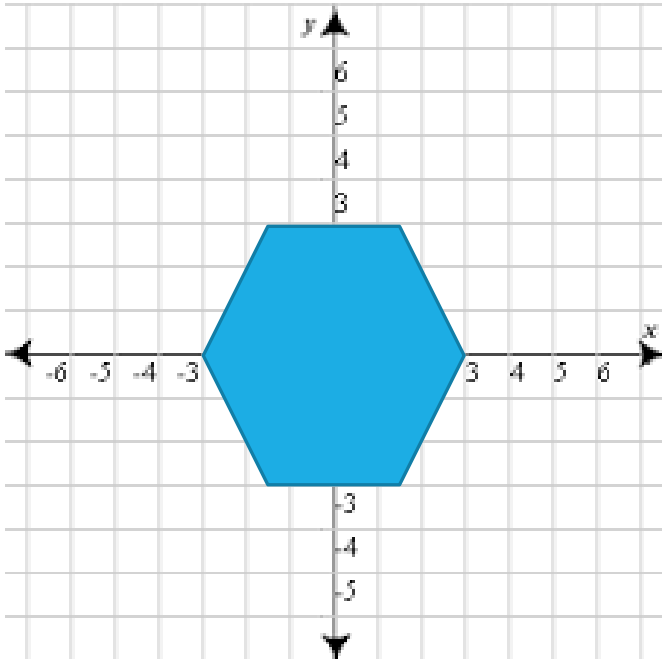
ROTATIONAL SYMMETRY

TRUE OR FALSE?

TRUE 1) Any figure will map onto itself after a 360° turn about its center.

FALSE 2) Any figure that has line symmetry must also have rotational symmetry.

Which does NOT describe a way to map the regular hexagon back onto itself?



A) Reflect it across the x-axis

B) Reflect it across the y-axis

C) Rotate it 60°

D) Rotate it 90°