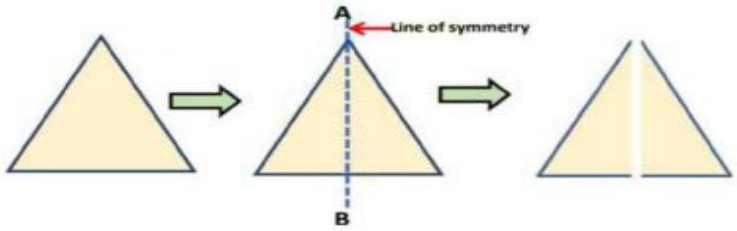
Lines of Symmetry

"A line that divides a whole shape into two parts, such that both the parts are identical and coincide with each other when flipped over one another, is called a line of symmetry".

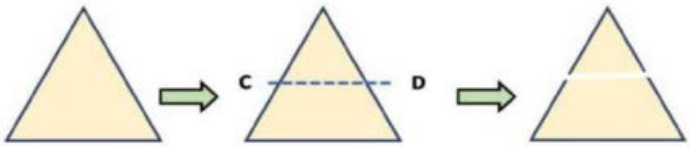
Consider the following triangle in which if we draw a line AB. It divides the triangle into two equal parts. The two equal parts look identical to each other and if we flip one part on the other it will look exactly the same.



Here, line AB is called the line of symmetry.

Now, if we draw a line CD as shown below,

We see it will also divide the triangle into two halves but that two parts are not identical to each other.

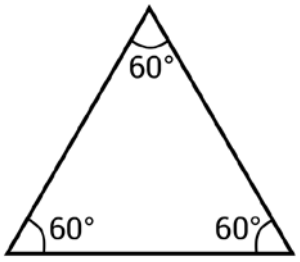


Hence, the line CD is not called the line of symmetry.

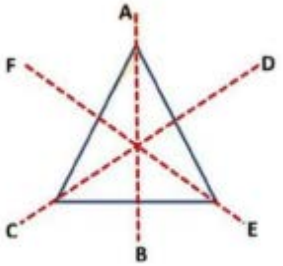
Lines of Symmetry for Regular Polygons

A polygon is regular if all its sides are of equal length and all its angles are of equal measure. We know all the regular polygons are symmetrical figures. A regular polygon has multiple lines of symmetry as it has sides. The lines of symmetry are dependent on the number of sides a regular polygon has.

Example: Consider an equilateral triangle, in which all sides are of equal length and measure of each angle is also equal i.e. 60°.



Suppose we draw line AB in the given equilateral triangle which divides the triangle into two equal parts. Similarly, if we draw lines CD and EF, they will also divide the triangle into two equal parts.



So, these three are the lines of symmetry of the equilateral triangle. Here, the number of sides of the equilateral triangle is three. So, the number of lines of symmetry is also three.