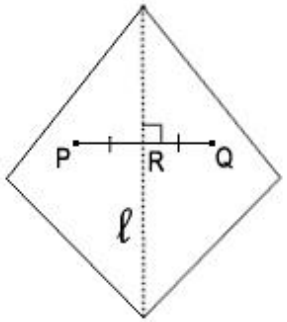
UNIT 1 LESSON 6 LINES OF SYMMETRY

A line symmetry, *l*, is a line separating a figure into two halves that are mirror images. Line symmetry exists for a figure if for every point *P* on one side of the line, there is a corresponding point *Q* where *l* is the perpendicular bisector of *PQ*.



Depending on a figure it may have many lines of symmetry or none at all.

Regular polygons are two-dimensional figures with all sides and all angles congruent.

Squares have four equal sides and four equal angles which makes it have four lines of symmetry. It can be rotated at any degree and have the same result.

Rectangles have two lines of symmetry: one vertical and one horizontal.

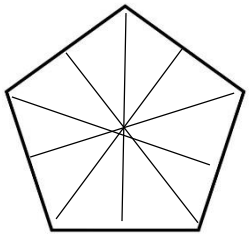
Trapezoid has one line of symmetry bisecting the parallel sides in half if and only if the non-parallel sides are of equal length which is called an isosceles trapezoid.

Parallelogram have no lines of symmetry if a 90^{o} angle is not present.

To find the smallest number of degrees needed to rotate a figure around its center onto itself: $\frac{360}{n}$

'n' represents the number of sides of the geometric figure

Ex 1) Given a regular pentagon ABCDE, draw the lines of symmetry.



There are 5 vertices, 5 sides which will give us 5 lines of symmetry.