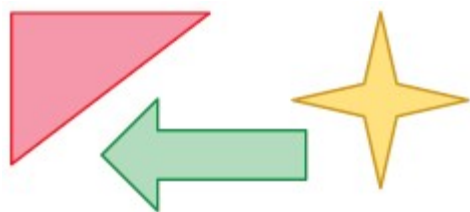


A \_\_\_\_\_ is a closed-plane figure, made up of three or more line segments that intersect only at their endpoints.



### **Key Idea**

#### **Interior Angle Measures of a Polygon**

The sum  $S$  of the interior angle measures of a polygon with  $n$  sides is

$$S = (n - 2) \cdot 180^\circ.$$

Ex:) Find the sum of the interior angles of the school crossing sign.

Notes:



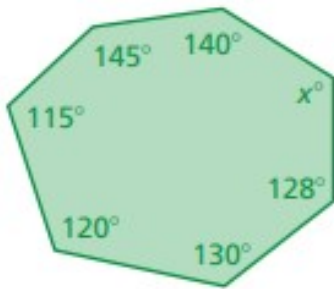
OYO:) Find the sum of the interior angle measures of the green polygon.

Notes:



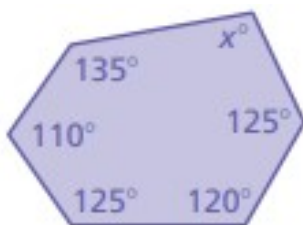
Ex:) Determine the value of  $x$ .

Notes:



OYO:) Determine the value of  $x$ .

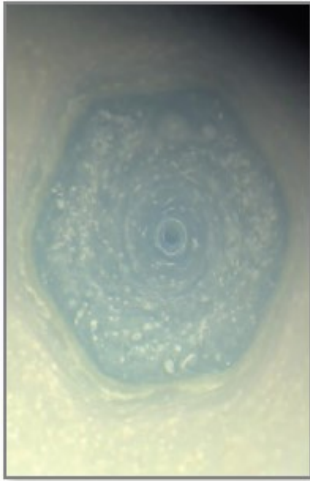
Notes:



In a \_\_\_\_\_ all the side lengths are congruent, and all the interior angles are congruent.

Ex:) A cloud system discovered on Saturn is in the approximate shape of a regular hexagon. Find the measure of each interior angle of the hexagon.

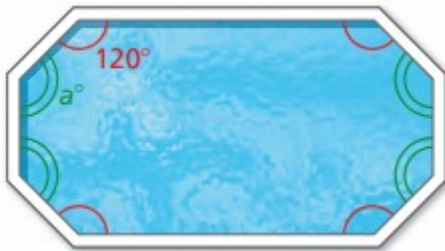
Notes:



OYO:) A company installs an octagonal swimming pool.

Notes:

a. Find the value of  $a$  for the pool shown.



b. The company installs a different pool that is also in the shape of an octagon. The second pool has twice the length and one-third the width of the first pool. Are the sums of the interior angles of the pools different? Justify your answer.

