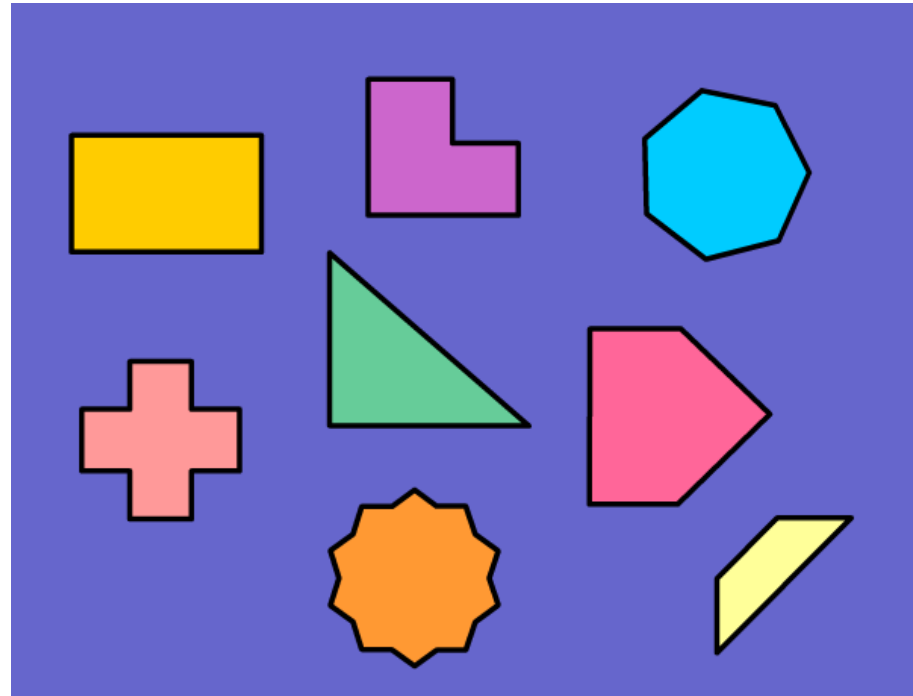


POLYGONS

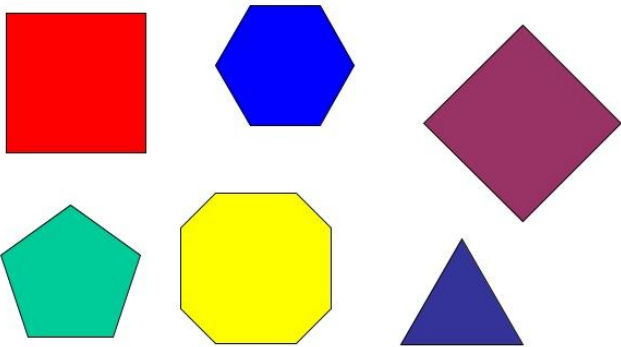


A polygon is a plane closed shape with straight sides.

They can be classified into....

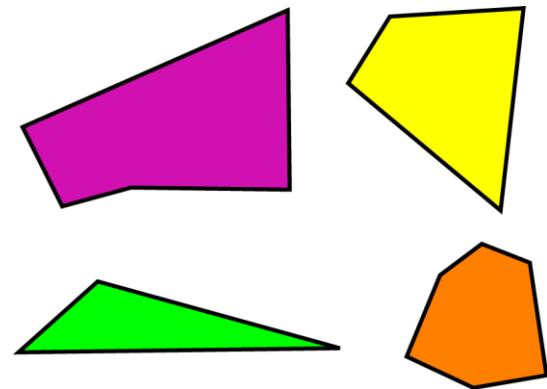
- **REGULAR**

- Sides are **ALL** congruent
- Angles are **ALL** congruent

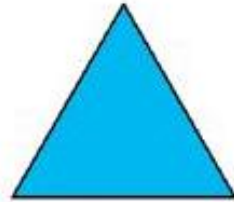


- **IRREGULAR**

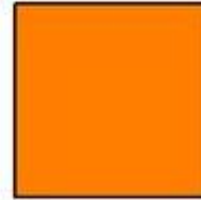
- Sides are not **ALL** congruent
- Angles are not **ALL** congruent



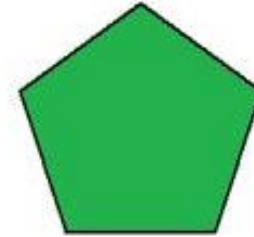
REGULAR POLYGONS



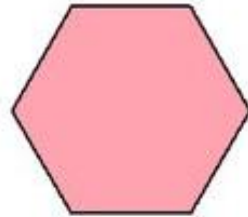
Equilateral
triangle



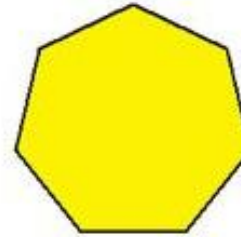
Square



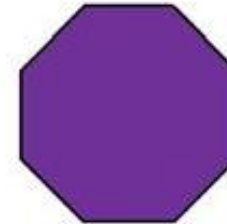
Regular
Pentagon



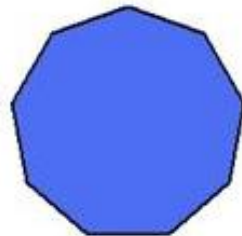
Regular
Hexagon



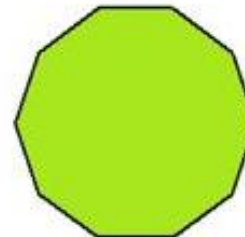
Regular
Heptagon



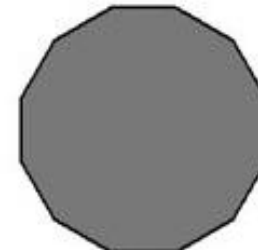
Regular
Octagon



Regular
Nonagon



Regular
Decagon



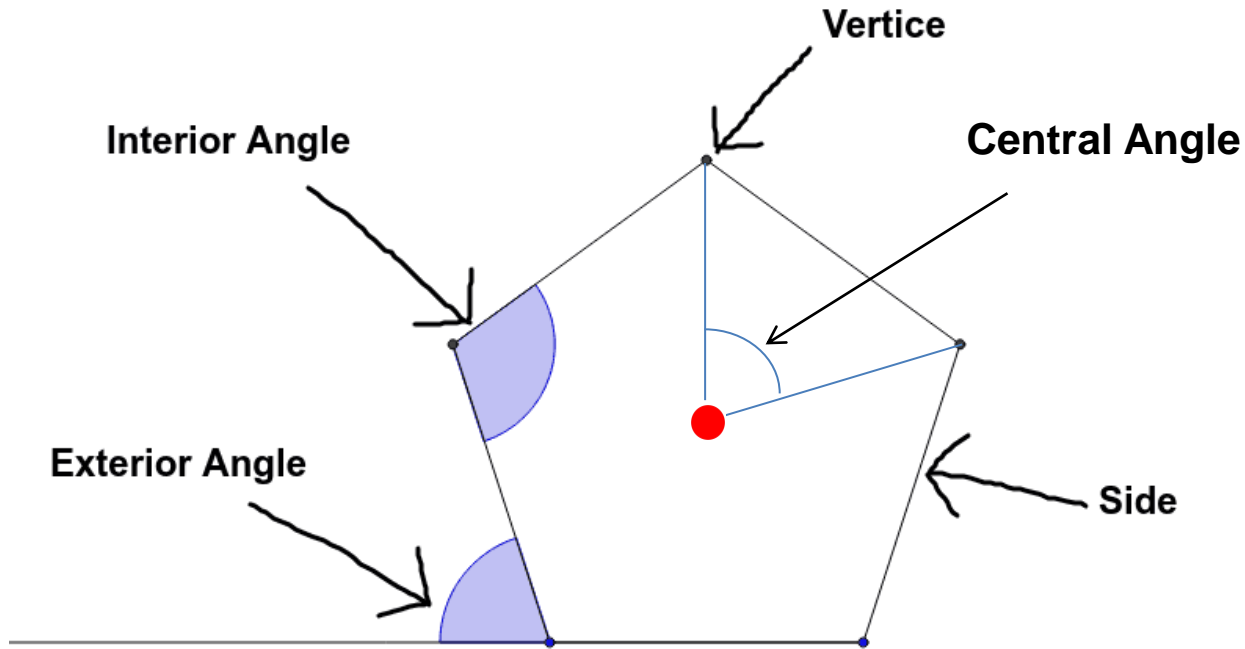
Regular
Dodecagon

Need more help?

<https://www.youtube.com/watch?v=-2-glnwpZ9c>

<https://www.youtube.com/watch?v=LyOjNIJ40lo>

PARTS OF A POLYGON



HOW TO DRAW **REGULAR** POLYGONS

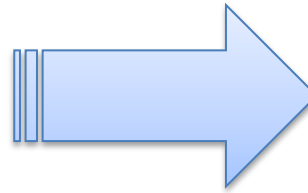
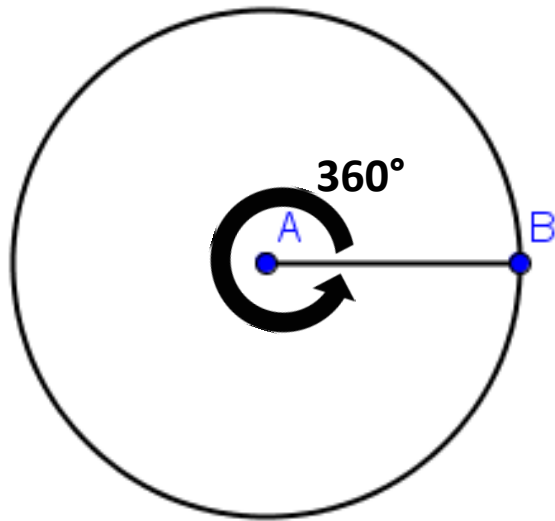


Watch my video uploaded in the school page.



Draw a pentagon, a decagon and an octagon. Name the parts.

HOW TO CALCULATE THE CENTRAL ANGLE OF A REGULAR POLYGON



We must divide 360° by the number of sides of the polygon.



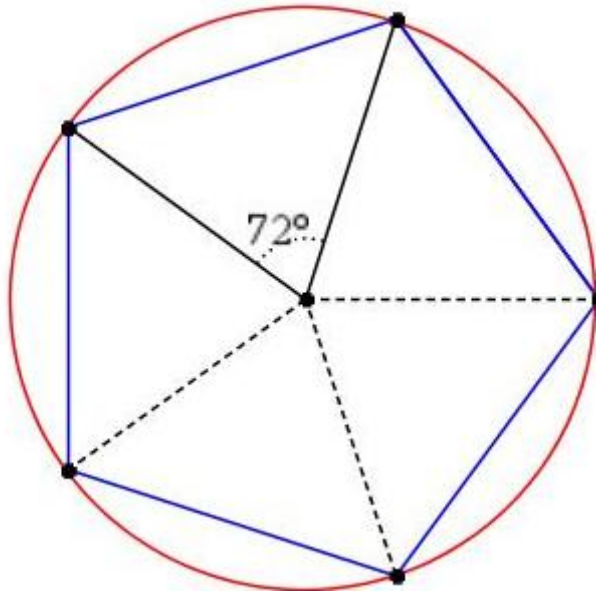
$$\text{Central angle} = \frac{360^\circ}{n}$$

where n is the number of sides.

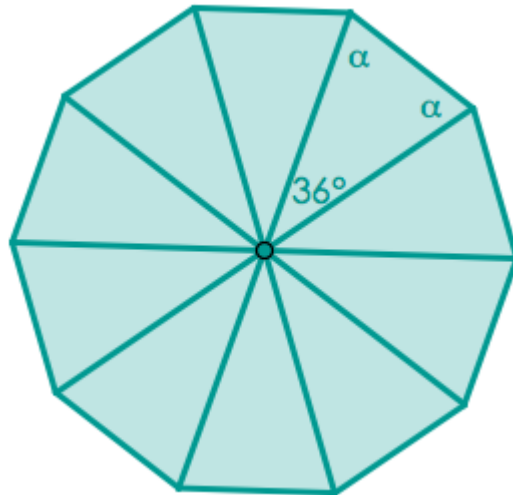


$$\text{Central angle} = \frac{360^\circ}{3} = 120^\circ$$

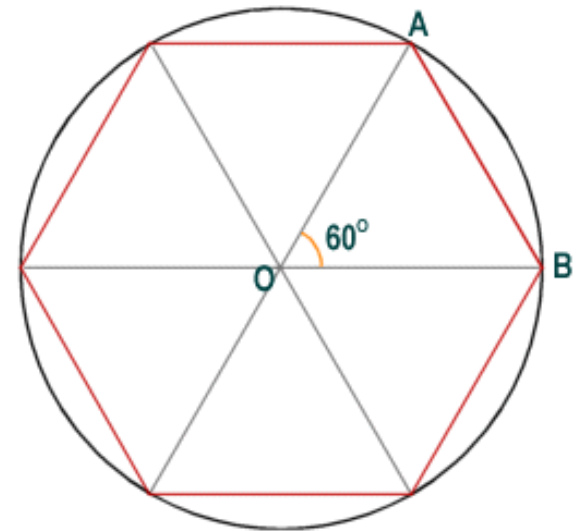
EXAMPLES



$$\begin{array}{l} \text{PENTAGON} \\ \underline{360} = 72^\circ \\ 5 \end{array}$$



$$\begin{array}{l} \text{DECAGON} \\ \underline{360} = 36^\circ \\ 10 \end{array}$$



$$\begin{array}{l} \text{HEXAGON} \\ \underline{360} = 60^\circ \\ 6 \end{array}$$



Copy the chart in the folder and complete **ONLY THE HIGHLIGHTED COLUMNS** of the table. Use the formula to calculate the central angles.

NUMBER OF SIDES	NAME	CENTRAL ANGLE	INTERIOR ANGLES	SUM OF INTERIOR ANGLES	EXTERIOR ANGLES
3	Equilateral triangle	120°			
4	Square	90°			
5	Pentagon				
6					
7					
8					
9					
10					
11					
12					

If you want to learn more and have more practice, you can visit these sites.



<https://www.mathsisfun.com/geometry/polygons.html>

<https://www.khanacademy.org/math/basic-geo/basic-geometry-shapes/basic-geo-properties-shapes/a/polygons-review>



Questions? You don't understand? Contact me at
ltovar@spatricio.com.ar



Once your work is ready, send it
ltovar@spatricio.com.ar

