

Name: \_\_\_\_\_

Website: <http://ghcimfm1p.weebly.com/3-angles-in-polygons.html>



TRIANGLE



QUADRILATERAL



PENTAGON



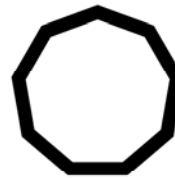
HEXAGON



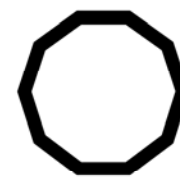
HEPTAGON



OCTAGON



NONAGON

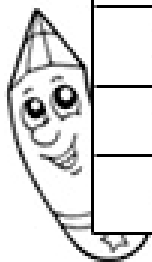


DECAGON

# POLYGON



Polygons	No. of Sides	No. of Angles	No. of Vertices	No. of Diagonals
Triangle	3	3	3	0
Quadrilateral	4	4	4	2
Pentagon	5	5	5	5
Hexagon	6	6	6	9
Heptagon	7	7	7	14
Octagon	8	8	8	20
Nonagon	9	9	9	27
Decagon	10	10	10	35



**Sum of Interior Angles =  $180^\circ \times (n - 2)$**   
**where  $n$  = number of sides.**

The number of sides of the given polygon is \_\_\_\_\_.

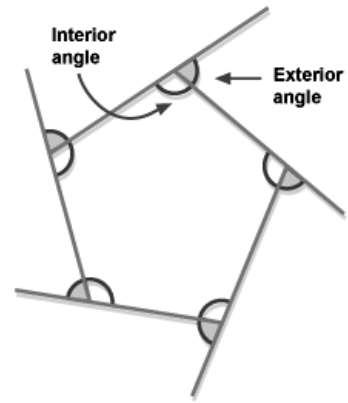
$n =$  \_\_\_\_\_

Total sum of all interior angles of the given polygon is:

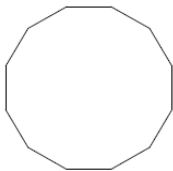
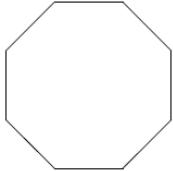
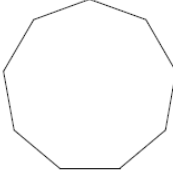
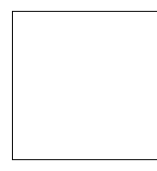
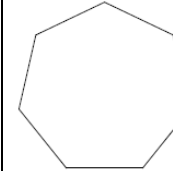
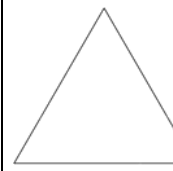
Each interior angle of the given polygon is:

**Sum of Exterior Angles =  $360^\circ$**   
**No matter what type of polygon it is.**

Each exterior angle of the given polygon is:



**Complete the chart.**

<b>Polygon</b>						
<b>Number of sides</b>						
<b>Sum of Interior Angles</b>						
<b>Each Interior Angle</b>						
<b>Sum of Exterior Angles</b>						
<b>Each Exterior Angle</b>						

**Sum of Interior Angles =  $180^\circ \times (n - 2)$**   
**where  $n$  = number of sides.**

The number of sides of the given polygon is 5.

$n =$  5

Total sum of all interior angles of the given polygon is:

**$540^\circ$**

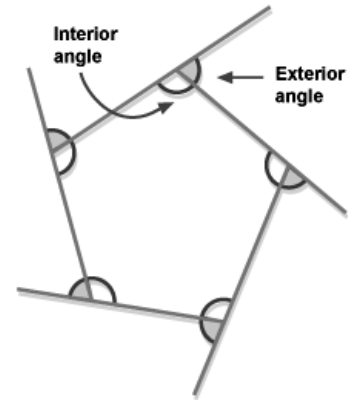
Each interior angle of the given polygon is:

**$108^\circ$**

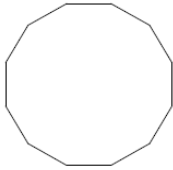
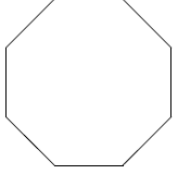
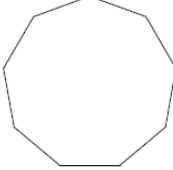
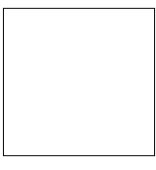
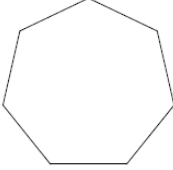
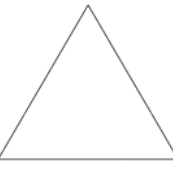
**Sum of Exterior Angles =  $360^\circ$**   
**No matter what type of polygon it is.**

Each exterior angle of the given polygon is:

**$72^\circ$**



**Complete the chart.**

<b>Regular Polygon</b>						
<b>Number of sides</b>	<b>12</b>	<b>8</b>	<b>9</b>	<b>4</b>	<b>7</b>	<b>3</b>
<b>Sum of Interior Angles</b>	<b><math>1800^\circ</math></b>	<b><math>1080^\circ</math></b>	<b><math>1260^\circ</math></b>	<b><math>360^\circ</math></b>	<b><math>900^\circ</math></b>	<b><math>180^\circ</math></b>
<b>Each Interior Angle</b>	<b><math>150^\circ</math></b>	<b><math>135^\circ</math></b>	<b><math>140^\circ</math></b>	<b><math>90^\circ</math></b>	<b><math>128.57^\circ</math></b>	<b><math>60^\circ</math></b>
<b>Sum of Exterior Angles</b>	<b><math>360^\circ</math></b>	<b><math>360^\circ</math></b>	<b><math>360^\circ</math></b>	<b><math>360^\circ</math></b>	<b><math>360^\circ</math></b>	<b><math>360^\circ</math></b>
<b>Each Exterior Angle</b>	<b><math>30^\circ</math></b>	<b><math>45^\circ</math></b>	<b><math>40^\circ</math></b>	<b><math>90^\circ</math></b>	<b><math>51.43^\circ</math></b>	<b><math>120^\circ</math></b>