|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Pentagon | Hexagon | Heptagon | Octagon |
| **Number of Sides** |  |  |  |  |
|  |  |  |  |  |
| **Number of triangles formed** |  |  |  |  |
| **Sum of ALL angles** |  |  |  |  |
| **Measure of EACH angle in the polygon** |  |  |  |  |

**Angle Measure of a Regular Polygon**

**Attachment D**

**Step 1**: Draw all the diagonals from one vertex and count the number of triangles formed. **Step 2**: Using properties of triangles, find the sum of the angle measures in the polygon. **Step 3**: Find the measure of each angle of the polygon.

Attachment D (cont’d)

Looking at the chart, can you find a pattern that will help to find the sum of the angles in a nonagon (a nine sided figure)?

Can you figure what the formula is for finding the sum of the angles of a regular polygon? (HINT: Let n represent the number of sides of the polygon.)

1. Find the measure of an angle of a regular polygon with 20 sides.

2. Find the measure of an angle of a regular polygon with 100 sides.