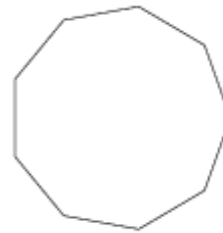


**CP Geometry**  
**Polygon Angle Problems**

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

- 1.) Find the sum of the measures of the interior angles of a 511-gon.
- 2.) Find the sum of the measures of the exterior angles of a 317-gon.
- 3.) The measure of each interior angle in a polygon is 178.5 degrees. How many sides does it have?
- 4.) A regular polygon has 510 sides. Find the measure of each interior angle to the nearest thousandth of a degree.

- 5.) What is the measure of each interior angle in the regular polygon on the left?



- 6.) What is the measure of each exterior angle in a regular dodecagon?
- 7.) The sum of the measures of the interior angles in a regular polygon is 2520 degrees. What is the measure of each exterior angle in the figure?
- 8.) The measure of each interior angle in a regular polygon is 174 degrees. How many sides does the polygon have?
- 9.) The measure of each exterior angle in a regular polygon is 36 degrees. How many sides does the polygon have?

- 10.) What is the measure of each interior angle in a regular 456-gon?
- 11.) The measure of each interior angle of a regular polygon is 157.5 degrees. How many sides does this polygon have?
- 12.) The measure of each interior angle of a regular polygon is 165 degrees. What is the **sum of the measures of its interior angles**?
- 13.) A regular polygon has the property that the sum of all but one of the measures of its interior angles is 3795 degrees. What is the measure of each interior angle in the figure?
- 14.) A polygon has the property that the sum of the measures of its interior angles is 7,740 degrees. What is the measure of each exterior angle in a regular polygon having five additional sides than the given polygon?