Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Table #: \_\_\_\_\_\_\_ Period: \_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_

**3.3B NOTES – Angles of Polygons**

*Objective: Use the sum of 360o for the exterior angle measures of polygon to find missing angle measures. Find the measure of each interior angle of a regular polygon (CCSS: 8.G.5)*

*HW: (3.3B) p. 124 #16 –24 (If you are doing on paper, copy the figures)*

**https://www.youtube.com/watch?v=BG1HpadfiKw&feature=youtu.be**

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| **REVIEW:** In a **REGULAR POLYGON**, all the sides are congruent, and all the interior angles are congruent. Find the measure of each interior angle of a regular hexagon.   |  |  | | --- | --- | |  | **Step 1:** Find the sum of the interior angles; use the formula:  **S = (n – 2) 180**  **Step 2:** Find the measure of each interior angle:  **Sum of interior angles ÷ n** | |
| |  | | --- | |  | |

*Find the measure of each interior angle of the regular polygon.*

|  |  |  |
| --- | --- | --- |
| 1. Octagon | 1. Decagon | 1. 18-gon |

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| **Key Ideas: Exterior Angle Measures of A Polygon**   |  |  | | --- | --- | |  | **WORDS:** The sum of the measures of the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ angles of a convex polygon is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.  **ALGEBRA:** w + x + y + z = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | |
| READ EXAMPLE 4 (P. 122) and then do On Your Own #9  **Example 1:** Find the measures of the exterior angles of the polygon. | |
| **Example 2:** Find the measures of the exterior angles of each polygon. | |
| **Example 3:** Find the measures of the exterior angles of each polygon. | |
| **Example 4:** Find the measures of the exterior angles of each polygon. | |
| **Example 5:** Find the measures of the exterior angles of each polygon. | |
| **Example 6:** The interior angles of a regular polygon each measure 144o. How many sides does the polygon have? | **Example 7:** The interior angles of a regular polygon each measure 120o. How many sides does the polygon have? |