10.4 – 10.5 Angles in a Polygon
Pre-AP Geometry Homework

Name _____
Period _____ Date _____

1. Each angle of an equiangular triangle has a measure of _____.

2. An interior angle of any polygon + its adjacent exterior always = _____.

3. Find the sum of the exterior angles of a convex heptagon.

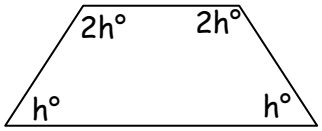
4. The measure of each exterior angle of a regular polygon is 45°. Name the polygon.

5. One interior angle of a regular polygon is 162°. Find the number of sides.

6. The measure of each interior angle of a regular polygon is eleven times that of an exterior angle. How many sides are in the polygon?

Find the value of each variable in the following problems.

7.



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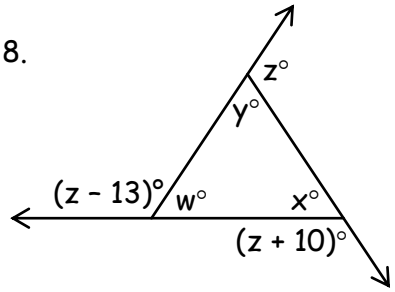

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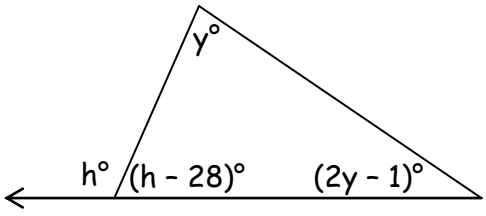

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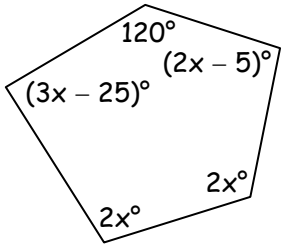
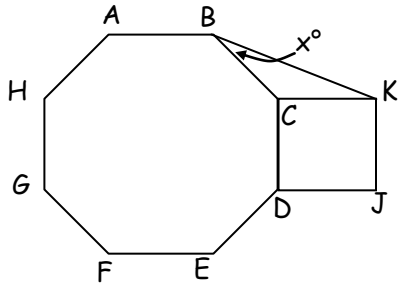


11. Given that ABCDEFGH is a regular octagon and CDJK is a square. ($x°$ is measure of $\angle CBK$) Find the measure of $x°$.



12. Find the measure of each exterior angle of a convex pentagon if the measure of the interior angles are $x - 10$, $2x - 5$, $2x + 15$, x, and $x - 20$.

13. Find the number of sides of a regular polygon is the measure of each interior angle is $140°$.

14. The ratio of the interior angles of a hexagon are 5:2:3:4:5:6. Find the measure of the largest angle of the hexagon.

15. The sum of the measures of the interior angles of a polygon is five times the sum of its exterior angles, one angle at each vertex. How many sides does the polygon have? What is this polygon called?