Name_____ Date _____ Pd ___

7.1 Angles of Polygons CYU

| CONCEPTS	BASIC	INTERMEDIATE	ADVANCED
Interior sum of polygons	1 – 4	5 - 8	9 - 14
Classifying polygons based on sides	5 - 8		
Exterior angles of polygons	15 - 16		
Each interior angle			

Find the sum of the measures of the interior angles of the indicated convex polygon.

1. nonagon   2. 14-gon   3. 16-gon   4. 20-gon

The sum of the measures of the interior angles of a convex polygon is given. Classify the polygon by the number of sides.
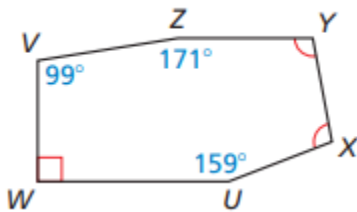
5. $720°$ 6. $1080°$ 7. $2520°$ 8. $3240°$

Find the value of x.

9.

10.

11.

12.
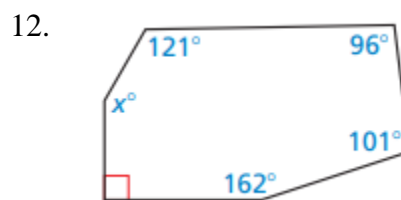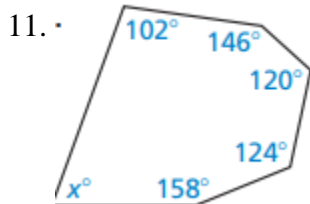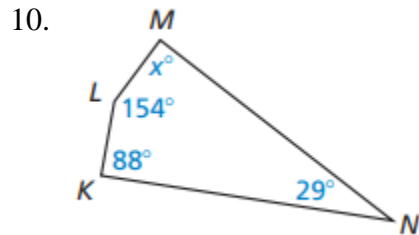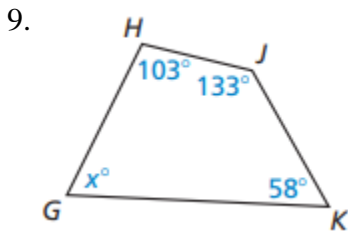
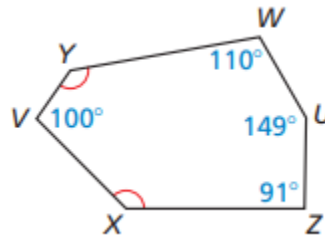*Find the measures of ∠X and ∠Y.*
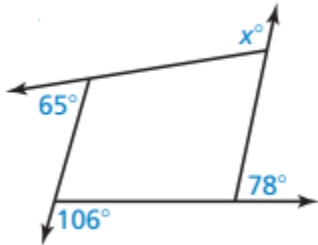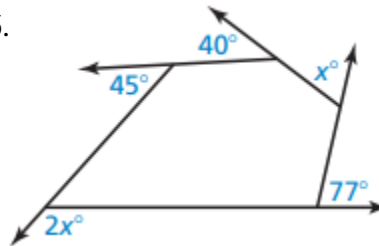
13.

14.

Find the value of x.

15.

16.

Find the measure of each interior angle and each exterior angle of the indicated regular polygon.

17. pentagon   18. 18 – gon   19. 45-gon

20. **MATHEMATICAL CONNECTIONS** In an equilateral hexagon, four of the exterior angles each have a measure of x°. The other two exterior angles each have a measure of twice the sum of x and 48. Find the measure of each exterior angle.