

7.1 Angles of Polygons CYU

Use when you get it right all by yourself
S Use when you did it all by yourself, but made a silly mistake
H Use when you could do it alone with a little help from teacher or peer
G Use when you completed the problem in a group
X Use when a question was attempted but wrong (get help)
N Use when a question was not even attempted

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	20	
Each interior angle	17-19		

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

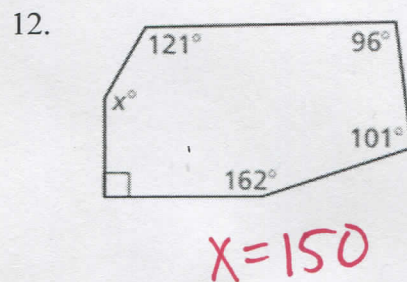
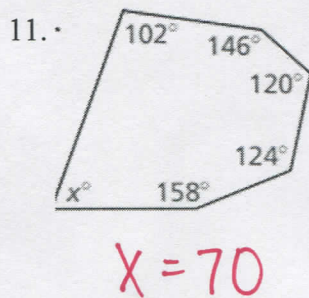
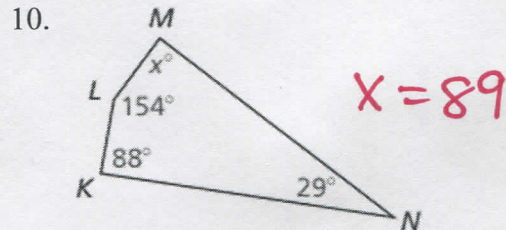
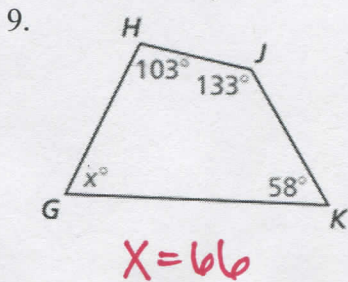
1260° 2160° 2520° 3240°

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°

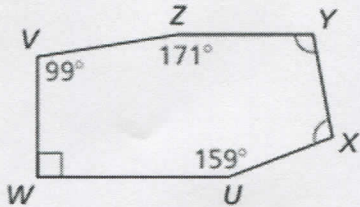
hexagon octagon 16-gon 20-gon

Find the value of x.



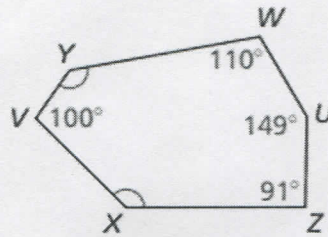
Find the measures of $\angle X$ and $\angle Y$.

13.



$$m\angle X = m\angle Y = 100.5^\circ$$

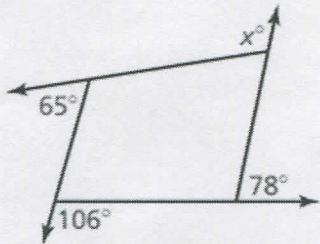
14.



$$m\angle X = m\angle Y = 135^\circ$$

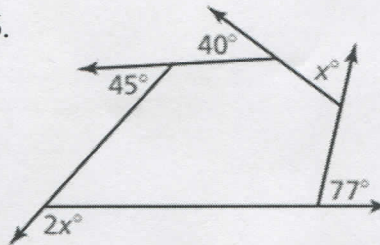
Find the value of x .

15.



$$x = 111$$

16.



$$x = 66$$

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

17. pentagon

18. 18-gon

19. 45-gon

$$108^\circ, 72^\circ$$

$$160^\circ, 20^\circ$$

$$172^\circ, 8^\circ$$

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.

$$21^\circ, 21^\circ, 21^\circ, 21^\circ, 138^\circ, 138^\circ$$

CYU Reflection: How far can you go: basic, intermediate, or advanced?

Rate your mastery level!

How confident are you with the skills this CYU covered? Circle the

●	●	●	●	●	●	●	●
1	2	3	4	5	6	7	8
Basic		Intermediate			Advanced		Solved ALL!

