Name _____ **Hour** _____

1. Find the sum of the interior angles of a 13-gon.

2. Find the sum of the exterior angles of a heptagon.

3. Find the measure of an interior angle of a regular nonagon.

4. Find the measure of an exterior angle of a regular 16-gon.

5. The sum of the interior angles of a polygon is 1800°. Classify the polygon by the number of sides.

6. The measure of an exterior angle of a regular polygon is 24°. Classify the polygon by the number of sides.

7. The measure of an interior angle of a regular polygon is 108°. Classify the polygon by the number of sides.

8. Find the sum of the exterior angles of a 19-gon.

9. Find the sum of the interior angles of a 20-gon.

10. Find the measure of an exterior angle of a regular decagon.

11. Find the measure of an interior angle of a regular 14-gon.

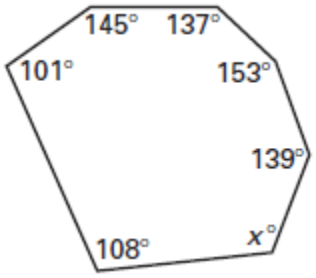
12. The measure of an exterior angle of a regular polygon is 120°. Classify the polygon by the number of sides.

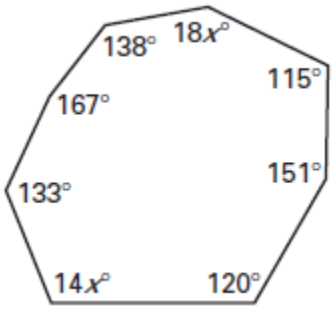
13. The sum of the interior angles of a polygon is 2880°. Classify the polygon by the number of sides.

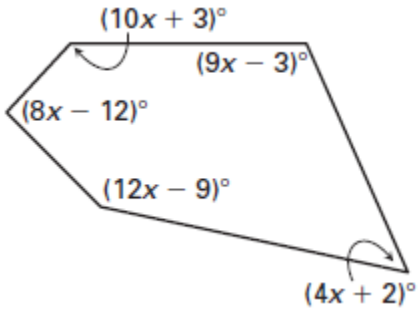
14. The measure of an interior angle of a regular polygon is 120°. Classify the polygon by the number of sides.

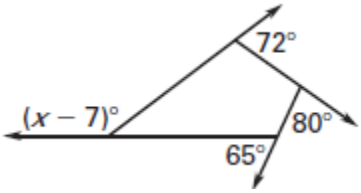
Angle Measures of Polygons

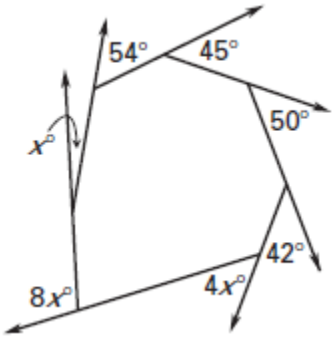
Find the value of *x*.

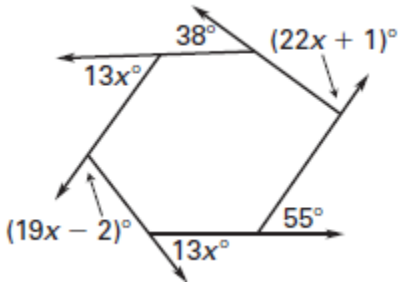
15. 

16. 

17. 

18. 

19. 

20. 

Tell whether the statement is *always*, *sometimes*, or *never* true.

21. As the number of sides of a polygon increases, the sum of the exterior angles decreases.

22. As the number of sides of a polygon increases, the sum of the interior angles increases.

23. As the number of sides of a regular polygon increases, the measure of each exterior angle increases.

24. The measure of an interior angle of a regular polygon is greater than the measure of an exterior angle of a regular polygon with the same number of sides.

25. If the number of sides of a regular polygon is doubled, then the measure of each exterior angle is halved.