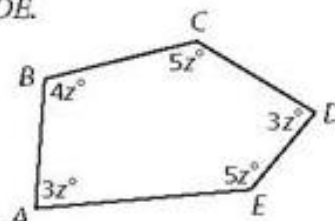
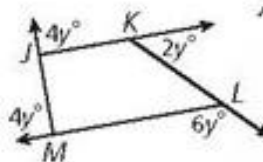


9. Find the measure of each interior angle of pentagon $ABCDE$.
10. Find the measure of each interior angle of a regular dodecagon.
11. Find the sum of the interior angle measures of a convex 20-gon.



12. Find the value of y in polygon $JKLM$.
13. Find the measure of each exterior angle of a regular pentagon.

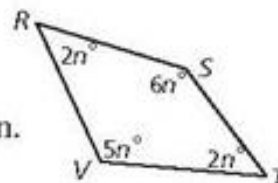


Safety Use the photograph of the traffic sign for Exercises 14 and 15.

14. Name the polygon by the number of its sides.
15. In the polygon, $\angle P$, $\angle R$, and $\angle T$ are right angles, and $\angle Q \cong \angle S$. What are $m\angle Q$ and $m\angle S$?



22. Find the measure of each interior angle of quadrilateral $RSTV$.
23. Find the measure of each interior angle of a regular 18-gon.
24. Find the sum of the interior angle measures of a convex heptagon.
25. Find the measure of each exterior angle of a regular nonagon.
26. A pentagon has exterior angle measures of $5a^\circ$, $4a^\circ$, $10a^\circ$, $3a^\circ$, and $8a^\circ$. Find the value of a .



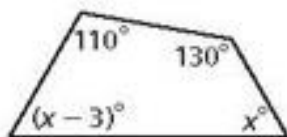
Crafts The folds on the lid of the gift box form a regular hexagon. Find each measure.

27. $m\angle JKM$
28. $m\angle MKL$

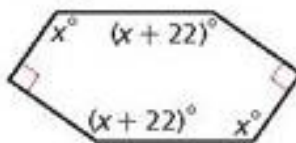


Algebra Find the value of x in each figure.

29.



30.



31.



Find the number of sides a regular polygon must have to meet each condition.

32. Each interior angle measure equals each exterior angle measure.
33. Each interior angle measure is four times the measure of each exterior angle.
34. Each exterior angle measure is one eighth the measure of each interior angle.

Name the convex polygon whose interior angle measures have each given sum.

35. 540°

36. 900°

37. 1800°

38. 2520°

Multi-Step An exterior angle measure of a regular polygon is given. Find the number of its sides and the measure of each interior angle.

39. 120°

40. 72°

41. 36°

42. 24°

53. Which terms describe the figure shown?

I. quadrilateral

II. concave

III. regular

A I only

C I and II

B II only

D I and III



54. Which statement is NOT true about a regular 16-gon?

F It is a convex polygon.

G It has 16 congruent sides.

H The sum of the interior angle measures is 2880° .

J The sum of the exterior angles, one at each vertex, is 360° .

55. In polygon $ABCD$, $m\angle A = 49^\circ$, $m\angle B = 107^\circ$, and $m\angle C = 2m\angle D$. What is $m\angle C$?

A 24°

B 68°

C 102°

D 136°