

Name _____

Date _____

Student Score:

Teacher Score:

LESSON
1.6**Practice A**

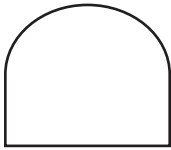
For use with pages 42–47

AtL

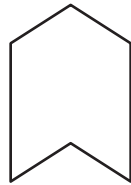
Form

Tell whether the figure is a polygon. If it is not, *explain why*. If it is a polygon, tell whether it is *convex* or *concave*.

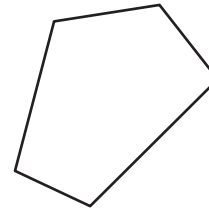
1.



2.



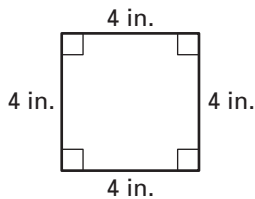
3.



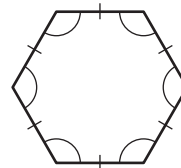
Show your work!
Circle your answer!

Classify the polygon by the number of sides. Tell whether the polygon is *equilateral*, *equiangular*, or *regular*. Explain your reasoning. Look at example 2 on p23 of NTG.

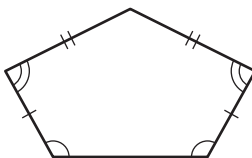
4.



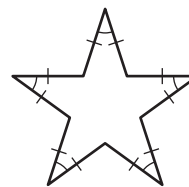
5.



6.



7.



8. The lengths (in meters) of two sides of a regular triangle are represented by the expressions $3x - 5$ and $x + 9$. Find the length of a side of the triangle.
9. The expressions $5x + 13$ and $10x - 7$ represent the lengths (in inches) of two sides of an equilateral octagon. Find the length of a side of the octagon.
10. The expressions $7x + 34$ and $11x - 14$ represent the lengths (in feet) of two sides of a regular hexagon. Find the length of a side of the hexagon.

Draw a figure that fits the description.

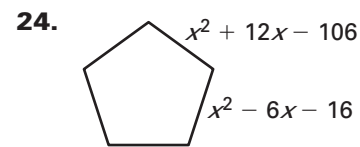
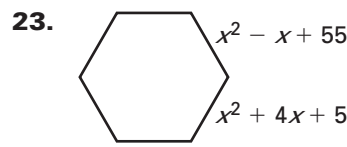
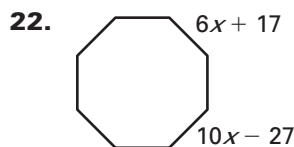
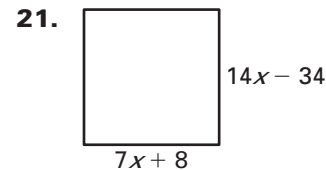
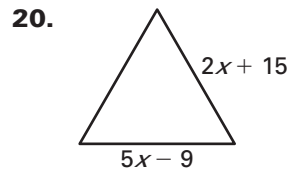
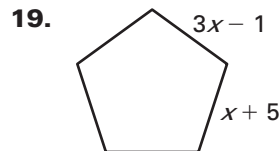
11. A hexagon that is not regular
12. A convex pentagon
13. A quadrilateral that is equilateral but not equiangular
14. A quadrilateral that is equiangular but not equilateral

LESSON
1.6**Practice A** *continued*
For use with pages 42–47

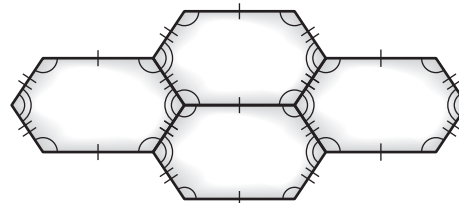
Tell whether the statement is *always*, *sometimes*, or *never* true.

15. A convex polygon is regular. 16. A regular pentagon is equilateral.
17. A regular heptagon is concave. 18. A square is convex.

Each figure is a regular polygon. Expressions are given for two side lengths. Find the value of x .

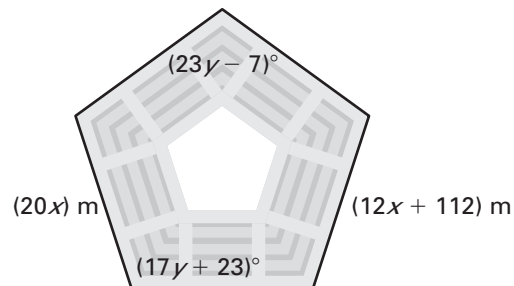


25. **Stained Glass Window** The diagram at the right shows the design used for a stained glass window. Use the diagram to answer the following.



- Classify the type of polygon used.
- Are the polygons convex or concave?
- Are the polygons regular? *Explain* your reasoning.

26. **The Pentagon** The figure at the right shows an outline of the Pentagon building near Washington D.C. The building is a regular pentagon. Use the diagram to answer the following.



- Find the length of one side of the Pentagon.
- Find the perimeter of the Pentagon.
- Find the value of the interior angles.