

Name \_\_\_\_\_

Date \_\_\_\_\_

LESSON 1.6

**Practice B**

For use with pages 42-47

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*.

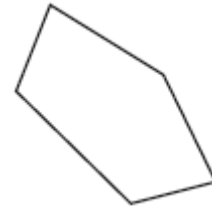
1.



2.

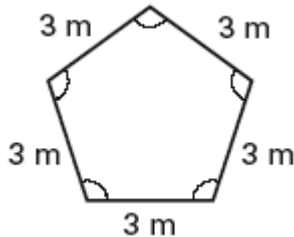


3.

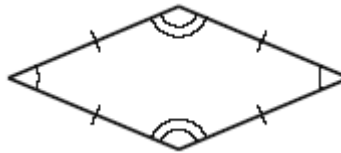


Classify the polygon by the number of sides. Tell whether the polygon is *equilateral*, *equiangular*, or *regular*. Explain your reasoning.

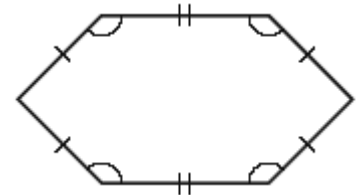
4.



5.



6.



7. The lengths (in feet) of two sides of a regular quadrilateral are represented by the expressions  $8x - 6$  and  $4x + 22$ . Find the length of a side of the quadrilateral.
8. The expressions  $(3x + 63)^\circ$  and  $(7x - 45)^\circ$  represent the measures of two angles of a regular decagon. Find the measure of an angle of the decagon.
9. The expressions  $-2x + 41$  and  $7x - 40$  represent the lengths (in kilometers) of two sides of an equilateral pentagon. Find the length of a side of the pentagon.

**Draw a figure that fits the description.**

10. A quadrilateral that is not regular

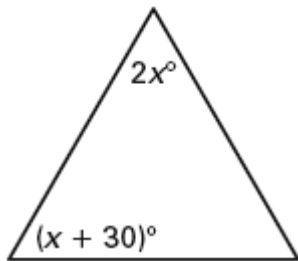
11. A convex heptagon

12. A concave pentagon

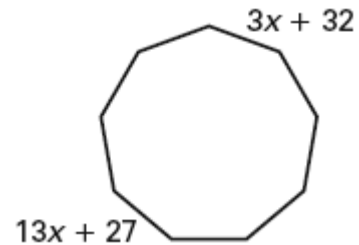
13. An equiangular hexagon that is not equilateral

Each figure is a regular polygon. Find the value of  $x$ .

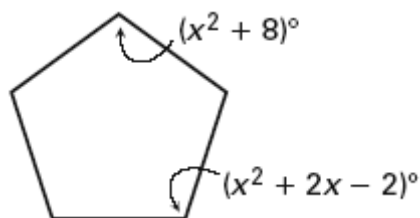
14.



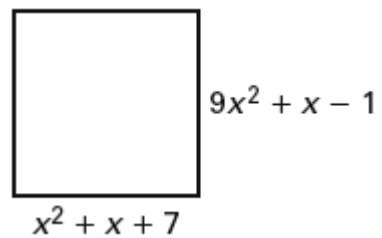
15.



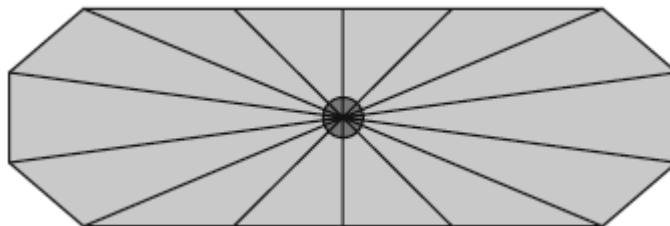
16.



17.



18. **Parachutes** The canopy of a parachute is shown in the diagram.



- Is the shape of the canopy a *convex* or *concave* polygon?
- Classify the polygon by the number of sides. Then use a ruler and a protractor to determine whether the figure is equilateral equiangular or regular.
- Determine the number of lines of symmetry in the canopy. How does this differ from a regular octagon?