

# Homework

p. 317: 1, 4, 10-13

- 1 Find the measure of an exterior angle of each of the following equiangular polygons.
  - a A triangle
  - b A quadrilateral
  - c An octagon
  - d A pentadecagon
  - e A 23-gon
- 4 Find the number of sides an equiangular polygon has if each of its angles is
  - a  $144^\circ$
  - b  $120^\circ$
  - c  $156^\circ$
  - d  $162^\circ$
  - e  $172\frac{4}{5}^\circ$
- 10 The sum of the measures of the angles of a regular polygon is 5040. Find the measure of each angle.
- 11 The sum of a polygon's angle measures is nine times the measure of an exterior angle of a regular hexagon. What is the polygon's name?
- 12 What is the name of an equiangular polygon if the ratio of the measure of an interior angle to the measure of an exterior angle is 7:2?

**13** Tell whether each statement is true Always, Sometimes, or Never (A, S, or N).

- a** If the number of sides of an equiangular polygon is doubled, the measure of each exterior angle is halved.
- b** The measure of an exterior angle of a decagon is greater than the measure of an exterior angle of a quadrilateral.
- c** A regular polygon is equilateral.
- d** An equilateral polygon is regular.
- e** If the midpoints of the sides of a scalene quadrilateral are joined in order, the figure formed is equilateral.
- f** If the midpoints of the sides of a rhombus are joined in order, the figure formed is equilateral but not equiangular.