6-3 Skills Practice: *Polygons & Angles*   Math8

1. **Find the sum of the measures of the interior angles of each polygon.**

   a. 13-gon   **b.** 16-gon   **c.** 17-gon

   d. 18-gon   **e.** 20-gon   **f.** 25-gon

2. **Find the measure of one interior angle in each regular polygon. Round to the nearest tenth if necessary.**

   a. pentagon   **b.** hexagon   **c.** 24-gon

   d. decagon   **e.** 18-gon   **f.** 23-gon

3. **Determine the angle measures in each polygon.**

   a.   **b.**

4. **Find the measure of x.**

   a.   **b.**

The irregular heptagon
has angles that measure
$x°$, $x°$, $2x°$, $2x°$, $3x°$, $3x°$, and $4x°$
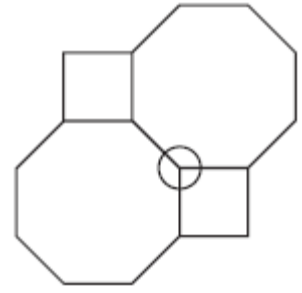
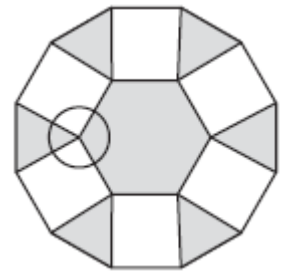**5.** A floor is tiled with a pattern consisting of regular octagons and squares as shown.

Find the measure of *each angle* at the *circled* vertex.

Then find the sum of the angles.

6. Jose is laying out a pattern for a stained glass window. So far he has placed the 13 regular polygons shown.

Find the measure of *each angle* at the *circled* vertex.

Then find the sum of the angles.

7. As the number of sides of a regular polygon increase, the polygon gets closer and closer to a true circle. The interior angles of any regular polygon can never actually reach 180°.
How many sides would a polygon have whose interior angles are exactly 179°?