

Student Guide

Angles and Lines

Questions 1–3 (SG p. 406)

1. 120° ; 360°
2. They are the same.
3. 360°

Here are four different patterns that are used to make quilts. Work with your group. Use your Power Polygons™ to make these patterns.



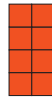
whirligig wheel



hexagon



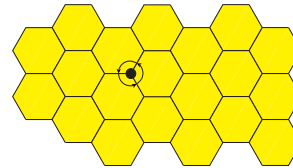
Ferris wheel



patchwork

These patterns are called **tessellations**—patterns made from one or more shapes that do not overlap, leave no gaps, and that can repeat over and over.

The following picture shows a tessellation made entirely of hexagons.



A large dot is placed where three hexagons come together. We call this a **vertex** of the tessellation.

1. What is the angle measure of each of the corners of the three hexagons where they come together? What is the sum of the three angles?
2. Choose another vertex. Are the angles at your new vertex the same as those at the large dot in the drawing above?
3. Find the sum of the angles at the new vertex.

Use the *Practice with Angles and Lines* pages in the *Student Activity Book* to practice the concepts in this unit.

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