Work in small groups of 3–4 students.

1. a. Trace or draw as many different kinds of triangles as you can on the dot paper. Measure each angle of each triangle and add the three angle measurements together.
   b. What is the total angle measurement for each triangle?

2. a. Trace or draw as many different kinds of quadrilaterals as you can. Measure each angle of each quadrilateral and add the angle measurements together.
   b. What is the total angle measurement for each quadrilateral?

3. Trace or draw a pentagon, a hexagon, and an octagon. Measure the angles of each shape and add the angle measurements for each shape together.
   a. What is the total angle measurement for a pentagon?
   b. What is the total angle measurement for a hexagon?
   c. What is the total angle measurement for an octagon?

4. a. Write conclusions about angle measurements in triangles and polygons.
   b. Describe the patterns that relate these angle measures to the shapes.

5. a. Draw a triangle with one 50° angle and one 30° angle.
   b. Without measuring, how can you predict the measure of the third angle? Use a protractor to check your prediction.

6. The rule for determining the total angle measurement of a polygon with \( n \) sides is \((n - 2)(180)\).
   a. Predict the total angle measurement for a decagon.
   b. Draw a decagon on dot paper.
   c. Measure each angle and add the measurements together to confirm your prediction.