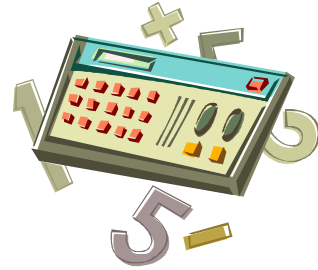


Algebra/Geometry Institute Summer 2004

Lesson Plan Three

Faculty Name: Avis Williams
School: Shelby Middle School
Shelby, MS 38762
Grade Level: 6



- 1 Teaching objective(s)
The students will inscribe squares and hexagons in circles.

- 2 Instructional Activities
 - Have students work together in two groups, one using each method, and discuss their results from Activity 1, 2, and 3.
 - To use paper folding, follow these steps.
Use your compass to draw a circle. Then cut out the circle.
Fold the circle in half and in half again.
Open the circle. Use your straightedge to draw line segments that connect the points where the paper folds meet the circle. Connect the points in order.
 - To use a compass and straightedge, follow these steps.
Use your compass to draw a circle.
Draw a diameter through the center of the circle. Then, draw a line perpendicular to the diameter through the center of the circle.
Use your straightedge to connect the points where the diameter and its perpendicular meet the circle. Connect the points in order.
 - To inscribe a regular hexagon in a circle, follow these steps.
Use your compass to draw a circle. Leave the compass at the same setting.
Put a point on the circle and place your compass on that point. Draw a small arc that intersects the circle.
Place the compass on the point where the arc intersects the circle.
Draw another small arc to intersect the circle.
Continue the process until you come back to the first point. Use the ruler to connect the intersection points.
 - Ask students what kinds of triangles would be formed by drawing radii from center of the circle to each vertex of the hexagon in Activity 3.
 - Use your protractor to measure the angles of the polygon and use a ruler to measure the sides. What did you find?

3 **Materials and Resources**

compass
protractor
ruler
scissors
straightedge

Glencoe Mathematics Application and Connections Course 2 p. 374-375

4 **Assessment**

Observation of students' work.

The teacher will listen for the correct student responses during oral discussion.

The teacher will grade tests for valid responses.