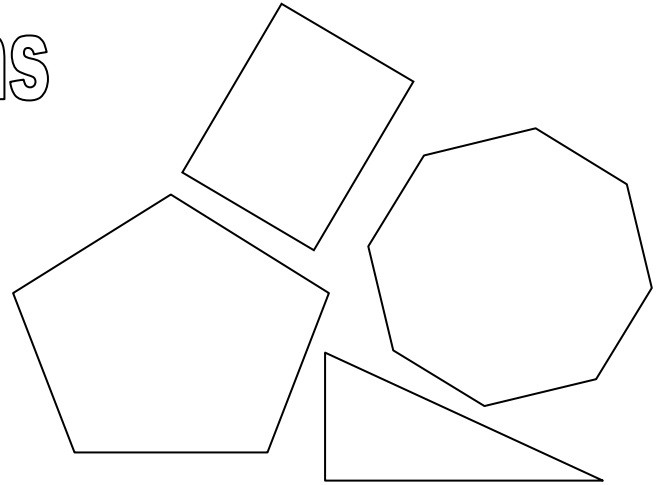


Algebra/Geometry Institute Summer 2006

Pondering Polygons

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School: Grenada Middle School
Grenada, MS
Grade Level: 7th



1 Teaching objective(s)

Mississippi Framework

- 3 a. Classify and compare polygons using their properties (including parallel sides, congruent sides, and angles).

Institute Content Based on MS Framework

- *Identify, compare, and classify polygons.*

2 Instructional Activities

Introductory Activity

The teacher will:

POLYGON

- write POLYGON on the board in large block letters
- ask students what they think about the word
- gradually give clues that lead the students to look at the individual letters as shapes instead of looking at the entire word
- define polygons and how they are named
- use the word on the board along with the definitions to help students identify which letters are polygons and which letters are not polygons. For the letters that are polygons, they will name the correct polygon according to the number of sides.
- have examples of all block letters for students to trace

The student will:

- guess why the word written in block letters is on the board
- make an orderly list of polygons and what they are named
- identify letters from the word on the board that could be polygons and name them
- on a large sheet of white paper, write their own name with block letters using templates provided
- identify how many polygons they have in their own name and which polygons appear in their name most often
- compare results with other students in the class

Activity #2

adapted from <http://illuminations.nctm.org/lessons/6-8/polygon>

The teacher will:

- Draw the following polygons on the board as indicated on [polygon template](#) handout. You may also make a class set so that each student can have a lettered set at his/her desk.
- Play the game “Who Am I?” by using the clues below to ask the student to identify polygons based on their characteristics.

The student will:

- Examine and talk about polygons from the [polygon template](#) within their group: identifying, comparing, and classifying them.
- Determine which of the polygons meet certain criteria as determined by the teacher’s clues.

3 Materials and Resources

- blank paper
- markers
- templates of block letters
- rulers or other straight edges
- [Polygon template](#)
<http://illuminations.nctm.org/lessons/6-8/polygon/masterc.pdf>

4 Assessment

The students will be assessed by observation and notes during the “Who Am I?” game. Students will be assessed on identifying and classifying polygons according to their characteristics.

Clues for “Who Am I?”

All angles are right angles.

At least one angle is obtuse.

No angle is a right angle.

At least one angle is less than 90° .

At least one angle is a right angle.

At least two angles are acute.

All angles have the same measure.

No pairs of sides are parallel.

All sides are of equal length.

Only one pair of sides is parallel.

At least one pair of sides is perpendicular.

All pairs of opposite sides are parallel.

It is a quadrilateral.

All pairs of opposite sides have equal length.

other clues may be added if you so desire

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B

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