

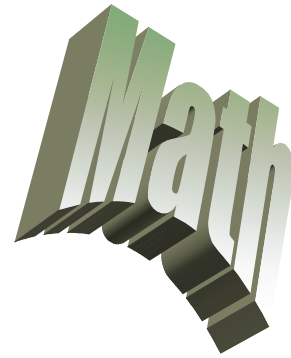
# Algebra/Geometry Institute Summer 2005

## Which Way Do I Go? (Identifying Angles)

**Faculty Name:** Lynette Gillespie

**School:** West Bolivar Middle School      Rosedale, MS

**Grade Level:** Fifth



### 1 Teaching objective(s)

The students will identify (draw and model) the four different types of angles.

### 2 Instructional Activities

The teacher will select a volunteer to remind the class about the definitions of lines, line segments and rays. The definitions will be written on the board. The teacher will draw examples of each on the board and allow the students to identify them. The teacher will explain to the students that today's lesson will be on identifying angles. The teacher will tell the students to locate the place on the ceiling that connects it to the top of the wall. (The students should identify the corner as this connecting place) The teacher will tell the students that the lines that connect the ceiling and the top of the wall can be thought of as two rays joined together. The teacher will explain that when these two rays join, they form an angle. The teacher will draw this angle on a transparency to help the students more readily visualize the angles. The teacher will tell the students that there are four different types of angles. The teacher will tell the students that the four different types of angles are called acute angles, right angles, obtuse angles and straight angles. The teacher will define each of the angles on the transparency and then use the overhead projector to provide examples. Time will be allowed to discuss each of the definitions with the students.

- These are the definitions of the four different types of angles and the examples that will be presented on a transparency.
- ❖ An acute angle is an angle that measures less than  $90^{\circ}$ .

Examples of acute angles follow:

- ✚ An angle that measures  $47^{\circ}$
- ✚ An angle that measures  $88^{\circ}$
- ✚ An angle that measures  $25^{\circ}$
- ✚ An angle that measures  $69^{\circ}$

➤ The teacher will allow the students to give some examples of acute angles.

- ❖ A right angle is an angle that measures exactly  $90^{\circ}$ .
- ❖ An obtuse angle is an angle that measures more than  $90^{\circ}$  but less than  $180^{\circ}$ .

Examples of obtuse angles follow:

- ✚ An angle that measures  $93^{\circ}$
- ✚ An angle that measures  $100^{\circ}$
- ✚ An angle that measures  $127^{\circ}$
- ✚ An angle that measures  $164^{\circ}$

➤ The teacher will allow the students to give more examples of obtuse angles.

❖ A straight angle is an angle that measures exactly  $180^{\circ}$ .

. The teacher will write the following measurements on the board:

- a)  $97^{\circ}$
- b)  $46^{\circ}$
- c)  $15^{\circ}$
- d)  $90^{\circ}$
- e)  $27^{\circ}$
- f)  $120^{\circ}$
- g)  $180^{\circ}$

The students will be given 5 minutes to classify each of the measurements as one of the four different types of angles. The teacher will walk around and observe the students' work. The students will use their thumbs up and thumbs down signals to signify completion. When all the students use the thumbs up signals, the teacher will choose volunteers to supply the correct answers. The teacher will walk around and make sure all students have the correct answers and assist any students as needed.

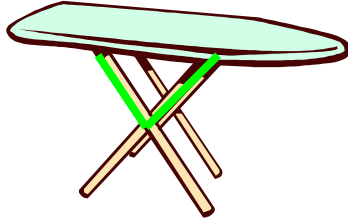
The correct answers are:

1. obtuse angle
2. acute angle
3. acute angle
4. right angle
5. acute angle
6. obtuse angle
7. straight angle

The teacher will ask the students to listen carefully to the following descriptions. The teacher will explain to the students that they will have to tell which of the four different angles is being described. The teacher will read the descriptions to the students. The students will be required to raise their hands if they can tell which of the four different angles is being described. If the students are having trouble visualizing the angles by listening to the descriptions, the teacher will show the following pictures on the overhead.

Here are the descriptions:

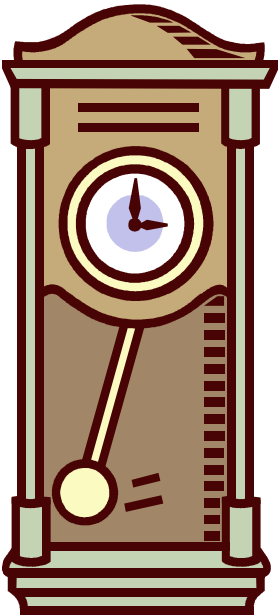
A. The crossing of the legs of an ironing board forms this type of angle. What type of angle is formed by the bright green angle? (Answer: an acute angle)



B. If a ballet dancer walks across the balance beam, the type of angle formed, which is highlighted in red, would be what type of angle? (Answer: a straight angle) There is another type of angle formed by the dancer's legs. What type of angle is it? (Answer: a right angle)



C. The angle formed by the hands on a clock when it is 3:00 p. m. (Answer: a right angle)



D. There are only four different types of angles, so what type of angle would be shown in the following picture? (Answer: an obtuse angle)



The teacher will walk around the room to make sure that all the students have the correct angles. The teacher will call on a student to answer each of the descriptions. The teacher will listen to the students' responses and make sure all students are participating. The teacher will review the definitions of the four different types of angles again with the students. The teacher will pass out worksheet 1 to the students. (Attachment 1) After completing worksheet 1, the students will be allowed to choose a book from the classroom library to read or complete a content related worksheet while the individual assessments are being done.

### 3 Materials and Resources

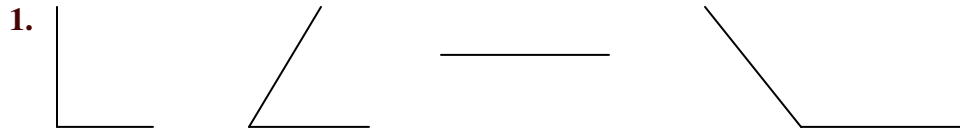
- Paper
- Pencil
- Markers
- Overhead projector
- Transparency
- Worksheet
- Chalkboard
- Chalk

#### 4 Assessment

Teacher observation will be used as students are working at their desks. Individual oral responses will also be used as the teacher asks each student to justify his/her answers to the sample board problems and the worksheets. A student checklist will be used to record the students' mastery of the objective. The teacher will set up a tri-fold board at the back of the room and call students to model with their arms the four different types of angles.

Attachment One

Directions: Correctly label each of the following angles. Then use the space provided to draw each of the angles in order from least to greatest.



\_\_\_\_\_



\_\_\_\_\_

