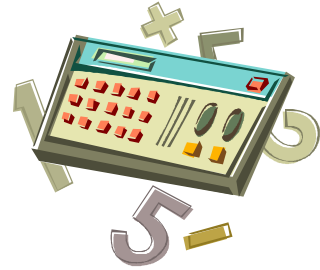


# Algebra/Geometry Institute Summer 2004

## Lesson Plan Three

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**School:** Shelby Middle School  
**City:** Shelby, Mississippi  
**Grade Level:** 4<sup>th</sup> Grade

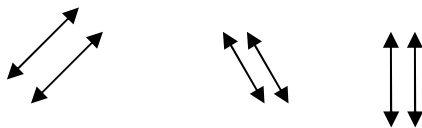


### 1 Teaching objective(s)

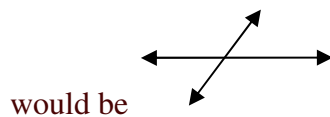
- ✚ The students will identify the differences between parallel, intersecting, and perpendicular lines.

### 2 Instructional Activities

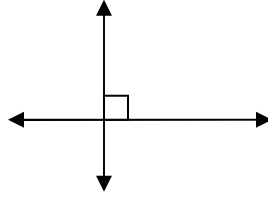
- ✚ The teacher will give students one (maybe two) sheet(s) of typing paper.
- ✚ The teacher will then give each student a ruler.
- ✚ Tell students to create any drawing that they prefer, but they must use their ruler.
- ✚ Give students enough time to create drawing.
- ✚ When students are finished, have parallel, intersecting, and perpendicular lines terminology on the board or overhead.
- ✚ Tell students that two lines that are the same distance apart but never touch are called parallel lines. Draw examples of parallel lines beside term to show the different directions that parallel lines can be drawn. Examples would be



- ✚ Tell students that intersecting lines are lines that cross each other. Draw examples of intersecting lines beside the intersecting line term and draw the different directions that intersecting lines can be drawn. An example



- ✚ Tell students that perpendicular lines are two intersecting lines (which mean they cross each other) that form a right angle. Draw an example of two perpendicular lines and show the right angle. An example would be



- ✚ Be sure to show right angle.
- ✚ Ask students to describe to you the difference between parallel lines and intersecting lines (Students should say that parallel lines don't touch, but intersecting lines touch each other).
- ✚ Ask students to describe to you the difference between parallel lines and perpendicular lines (Students should say that parallel lines don't touch, but perpendicular lines do, so that right angles are formed).
- ✚ Ask students to describe the difference between intersecting lines and perpendicular lines (Students should tell you that both cross each other, but perpendicular lines form a right angle).
- ✚ Make sure that all students have an understanding of the different characteristics of each. You may want to keep examples on board or overhead for students to refer to.
- ✚ Instruct students to look at their pictures drawn earlier.
- ✚ Tell them they may choose any three colors they want to use (They may use crayons, color pencils, or markers).
- ✚ Allow students to make a legend on their drawing.
- ✚ Tell them that each color represents one of the three lines. (Ex. Red-parallel lines, blue-intersecting lines, and purple-perpendicular lines)
- ✚ Once legend is complete, instruct students to find all the parallel lines on their drawing and label it with the corresponding color in pencil. (Example: r is for red)
- ✚ They are to do the same for intersecting and perpendicular lines. (Example: b is for blue, and p is for purple)
- ✚ Allow students to get into pairs to check each others' paper for errors.
- ✚ Once students have corrected labels, then they may color their lines with the correct corresponding color.

### 3 Materials and Resources

- ✚ Pencil
- ✚ Typing Paper
- ✚ Rulers
- ✚ Crayons/Color Pencils/Markers

#### 4 Assessment

- ✚ Allow students to explain their drawings and how their colors correspond with the lines on their paper. (This will help the student to understand the different types of lines).