Algebra/Geometry Institute Summer 2003

Lesson Plan 1

Faculty Name: Mary C. Brown
School: Shelby Middle School
City: Shelby, MS 38732
Grade Level: 5th

1 Teaching objective(s)

The student will identify a number as prime or composite.

2 Instructional Activities

- The teacher will start class by reviewing multiplication facts using multiplication flash cards (only allow students enough time to see the fact and immediately give the product).
- After about ten minutes of practice, the teacher will write the following numbers on the board: 2, 3, 5, 6, 9, 10 and 12.
- The teacher will explain the meaning of factoring.
- Have students record numbers in notebook and write down all the factors to each number.
- Ask students how does knowing multiplication facts help with factoring.
- Explain to students that they will now begin exploring prime and composite numbers.
- Focus students' attention back to numbers on the board.
- Ask students if they noticed any similarities in factoring the numbers.
- Tell students that they are to identify the numbers as being prime or composite after listening to the rules.
- Explain "divisibility rules" for determining if a number is prime or composite. (See Attachment #1). For example, when a number has more than two factors, it is called a composite number. If a number has only two factors it is prime.
- Tell students that the numbers 1 and 0 are not prime because the definition states that the number has to be greater than 1.
- Explain to students if a number is even, unless it is 2, it is always composite.
- Have students form groups to work activities by selecting number tiles to determine group formation.
- Give each group a set of dominoes to work with.
- Have students select five dominoes at a given time.
- Tell students to set dominoes up vertical and present as an addition problem by recording the number of dots above and below the line (or each half of the dominoes).
- Have students write problem (from dominoes) and identify each number in problem as being prime or composite.
- While students are still in group formation, distribute a 100 reproduction sheet to each student.
- Have student use coloring pencil/markers/crayons to identify all the prime numbers from 1 to 50 using one color and all composite numbers using another color.

- ❖ Remind students of divisibility rules for determining if a number is prime or composite.
- ❖ Students are to shade the box in slightly using coloring pencils/markers/crayons. Briefly discuss findings.
- ❖ Administer test on "Prime and Composite Numbers" to check for understanding. (See Attachment #2)

3 Materials and Resources

References: Textbook - Houghton Mifflin Mathematics. Houghton Mifflin Company, 2002. 5th Grade

Dryboard/marker
Paper
Pencil
Multiplication Flash Cards
Dominoes
100 Reproduction sheets
Colored pencils/markers/crayons
Handouts

4 Assessment

Listening
Teacher Observation
Graded Papers

Attachment #1

Divisibility Test

Rules of determining if a number is prime or composite:

1) A number is divisible by 2 if its last digit is 0, 2, 4, 6 or 8.

2) A number is divisible by 3 if the sum of its digits is divisible by 3.

3) A number is divisible by 4 if the number formed by its last two digits is divisible by 4.

4) A number is divisible by 5 if its last digit is 0 or 5.

5) To test for 7, just divide by 7 and see.

Attachment #2

Prime and Composite Numbers

Name _____ Date_____ Period_____

Tell if the following numbers are prime or composite. Label with P or C.

1. 9 _____
2. 12 _____
3. 35 _____
4. 10_____
5. 27_____
6. 18 _____
7. 11 _____
8. 19_____
9. 20 _____
10. 25 _____