

Algebra/Geometry Institute Summer 2003

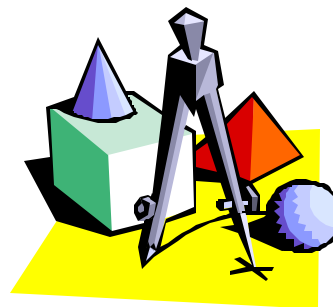
Lesson Plan 1

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 _____