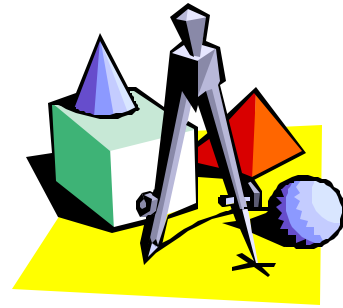


Algebra/Geometry Institute Summer 2003

Lesson 3

Faculty Name: Collis L. Grisby
School: Shelby Middle School
City: Shelby, Ms
Grade Level: 6th



1 Teaching objective(s)

- ❖ The students will learn to use the rules of divisibility.

2 Instructional Activities

- ❖ The lesson will begin with a warm-up game. The teacher starts the game by saying a number and continuing throughout the class by asking each student to give a multiple of that number until each student has given a correct answer. The game will be done for the numbers 2, 3, 5, and 10 to get the students motivated about the lesson.
- ❖ Following, a set of 16 colored markers will be given to the first student and he/she is asked if the markers could be evenly divided between him/her and three other students.

Class warm-up:

To solve this problem the students should divide 16 by 4 and learn that since $16 \div 4 = 4$, each of them should get 4 markers and that 16 is divisible by 4.

- ❖ Afterward, the divisibility rules for 2, 3, 5, 9, and 10 are written on the board, with three examples to observe assessment of context and as a guided practice.

A number is divisible by:

- 2 if the ones digit is divisible by 2
- 3 if the sum of the digits is divisible by 3.
- 5 if the ones digit is 0 or 5.
- 6 if the number is divisible by both 2 and 3.
- 9 if the sum of the digits is divisible by 9.
- 10 if the ones digit is 0.

Examples:

1. Is 58 divisible by 2?

The ones digit is 8. Since $8 \div 2 = 4$, 8 is divisible by 2.
So, 58 is divisible by 2

2. Is 498 divisible by 9?

The sum of the digits is $4 + 9 + 8$, or 21. Since 21 is not divisible by 9, 498 is not divisible by 9.

3. Is 3,285 divisible by 2, 3, 5, 6, 9, or 10?

2: No. The ones digit, 5, is not divisible by 2.
3: Yes. The sum of the digits, 18, is divisible by 3.
5: Yes. The ones digit is 5.
6: No. The number is divisible by 3, but not 2.
9: Yes. The sum of the digits, 18, is divisible by 9.
10: No. The ones digit, 5, is not 0.

So, of the given numbers, 3,285 is divisible by 3, 5, and 9.

- ❖ Upon completion of a question and answer section with the students being chosen at random, the following activity will be given to be completed by the end of class as a written assessment.

Direction: Determine whether the first number is divisible by the second number.

- | | | | |
|-------------|---------------|--------------|--------------|
| 1. 79; 3 | 2. 84; 2 | 3. 95; 5 | 4. 140; 10 |
| 5. 542; 6 | 6. 261; 9 | 7. 1,752; 2 | 8. 642; 6 |
| 9. 1,324; 5 | 10. 1,740; 10 | 11. 5,432; 3 | 12. 3,330; 6 |

State whether each number is divisible by 2, 3, 5, 6, 9, or 10.

- | | | |
|-----------|-----------|---------|
| 13. 802 | 14. 275 | 15. 379 |
| 16. 981 | 17. 1,689 | 18. 735 |
| 19. 2,648 | 20. 3,330 | |

3 Materials and Resources

- ❖ White board, markers, paper, pencils, handouts, and easel stand.

4 Assessment

- ❖ Oral and written responses, class participation, and graded individual papers.