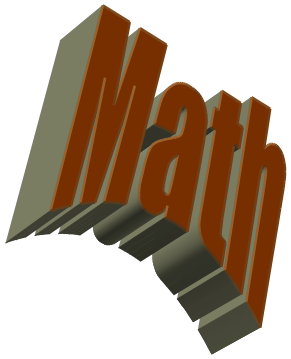
Algebra/Geometry Institute Summer 2005

Lesson Plan One: Prime and Composite Numbers



Faculty Name: Luetrina Taylor
School: Melissa Manning, Greenville, MS
Grade Level: 5th

1 Teaching objective(s)

The students will find factors to identify prime and composite numbers.

2 Instructional Activities

The teacher will say, "Today we will be discussing prime numbers, composite numbers, and prime factorization. We will be using cubes to find the factors of a number." The teacher will review the definition for prime and composite numbers. The teacher will also review with students the activity in which building arrays was conducted in a previous lesson.(The cube will be a helpful kinesthetic tool to find factors.)

Example: Students start with two (2) cubes and find that the facts 2 x 1 and 1 x 2. The factors are 1 and 2. Teacher and students continue this procedure until the chart is completed.

Draw the following chart on a transparency and place on the overhead projector:

Numbers	Factors	Prime	Composite
0			
1			
2	1, 2	X	
3			
4			
5			
6			
7			
8			
9			

Next, the teacher will have students make as many different rectangular arrays as possible with 12 cubes, writing down each number as they complete it. Discuss the factors of a number, and have students circle the factors for 12. Remind students that each factor may only be circled one time. Once they are finished, discuss answers.

Examples :

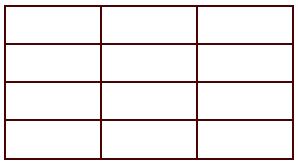
12

1 

6

2 

3

4 

Divide the class into four (4) groups. Pass out the "hundred boards" (see attachment) activity sheets, markers, pencil and paper. Students will draw rectangular arrays to help them complete the activity sheet. Students will work cooperatively to discover the prime numbers under 100. Group 1 will complete 10-25; Group 2 will complete 26- 50; Group 3 will complete 51-75; and Group 4 will complete 76 - 100. (ans. 2, 5, 7,11,13, 17, 19, 23, 29, 31, 37, 41, 43, 47, 53, 59, 61, 67, 71,73, 79, 83, 89 and 97). **(30 min.)**

Have students highlight all primes with markers.

Variation of "hundred boards"

- Make transparency of "hundreds board" activity

3 Materials and Resources

Overhead Projector
Overhead tiles
Cubes
Hundred Board sheet
Markers
Pencil
Paper
Textbook: Geometry: Houghton Mifflin Company, 1999
Workbook: Addison-Wesley Publishing Company, Using Manipulatives in the Classroom: Copyright 1998

4 Assessment

- While students are working in groups and at centers, monitor and observe students. The teacher will be observing team work and participation. The teacher will also answer questions, if needed.
- Activity sheets will be graded, recorded and returned to students. Sheets will be placed in student's folder.
- The concept taught will be on chapter test.

HUNDRED BOARD

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100