

The Ants Go Marching!



Standard: 4.OA.4 Find all factor pairs for a whole number in the range 1-100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1-100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1-100 is prime or composite.

Materials: Picnic paper cloth cut into placemat size, 1 per pair of students
Bog of Plastic Ants, 40-50 each bag, 1 bag per pair of students
Number Cards: 12, 16, 18, 20, 24
Recording Sheet
Colored pencils

Directions:

1. Each pair of students will need a picnic placemat, a bag of ants, recording sheet, and colored pencils.
2. The group of students reviews the example provided and discusses the objective of the activity with their partner.
3. The Leader places the number cards face down in the center of the group and turns over the top card.
4. Each pair takes that many ants and arranges them in arrays of equal rows and columns. They try to make as many arrays as possible for that number.
5. After creating the array, they draw the arrays, record all the factors of the number on the recording sheet.
6. Each pair must explain to another pair how each array represents factors of a number and multiples of the factors.
7. Each pair explains, to the entire group, which array they found the most interesting and why.
8. This process is repeated with the remaining numbers on the cards.

Challenge: Determine new numbers and arrange them in arrays.

12

16

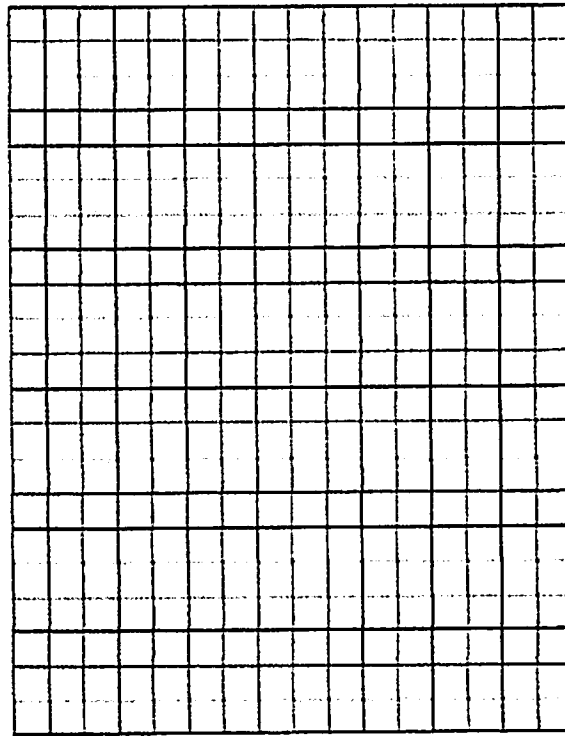
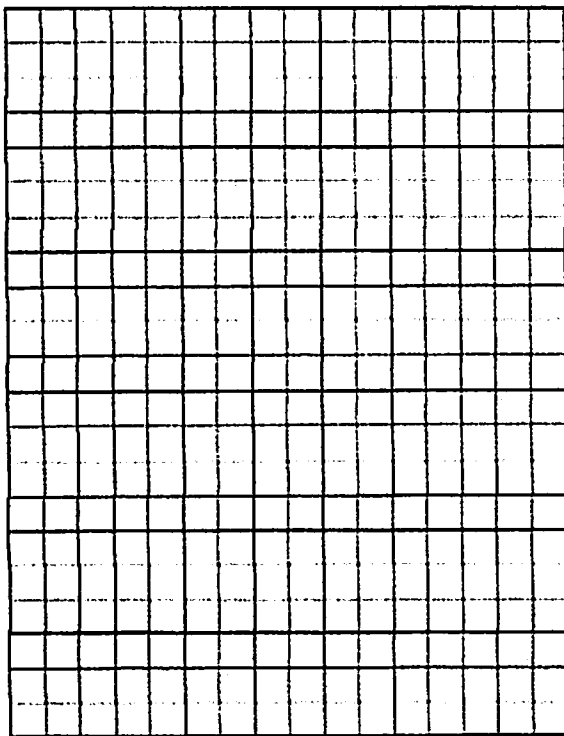
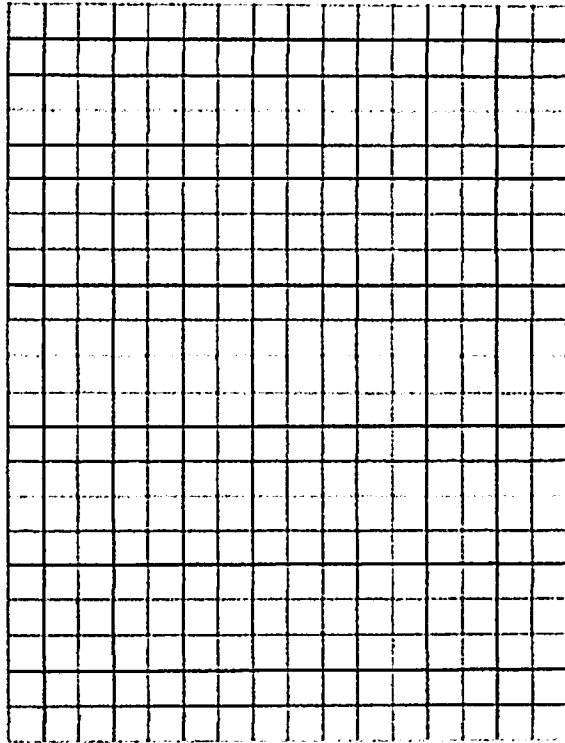
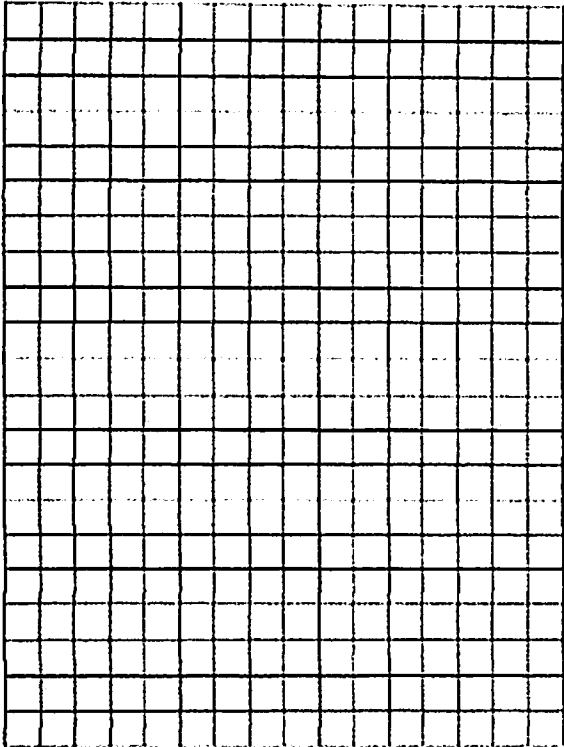
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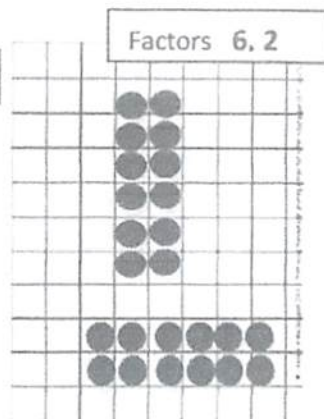
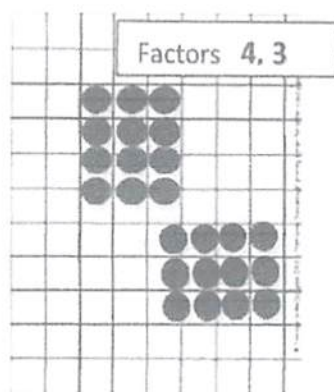
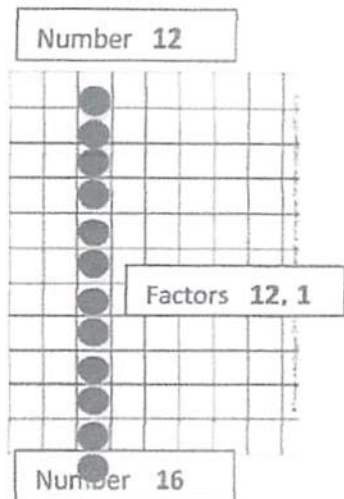
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The Ants Go Marching Recording Sheet

Names _____



The Ants Go Marching EXAMPLE



Number 18

Number 24

Factors of and Multiples in 12

Factors: 1, 2, 3, 4, 6, 12

Multiples of 2: 2, 4, 6, 12

Multiples of 3: 3, 6, 12

Multiples of 6: 6, 12

Multiples of 4: 4, 12

Factors of and Multiples in 16

Factors: 1, 2, 4, 8, 16

Multiples of 2: 2, 4, 8, 16

Multiples of 4: 4, 8, 16

Multiples of 6: 6, 12

Multiples of 4: 4, 12

Factors of and Multiples in 18

Factors: 1, 2, 3, 6, 9, 18

Multiples of 2: 2, 6, 18

Multiples of 3: 3, 6, 9, 18

Multiples of 6: 6, 18

Multiples of 9: 9, 18

Factors of and Multiples in 20

Factors: 1, 2, 4, 5, 10, 20

Multiples of 2: 2, 4, 10, 20

Multiples of 4: 4, 20

Multiples of 5: 5, 10, 20

Factors of and Multiples in 24

Factors: 1, 2, 3, 4, 6, 8, 12, 24

Multiples of 2: 2, 4, 6, 12, 24

Multiples of 3: 3, 6, 12, 24

Multiples of 4: 4, 8, 12, 24

Multiples of 6: 6, 12, 24

Multiples of 8: 8, 24

ANSWER

KEY

Name _____

The Ants Go Marching

Garrett and Erin were playing a game on a numbered game board. A section of their game board is shown below.

In the game, players have to cover numbers that are multiples of both 2 and 3.

Circle all the numbers on this section of the game board that are multiples of both 2 and 3.

The game board Garrett and Erin are using has all the numbers from 1 to 100. Identify three other numbers on the game board besides the ones you circled below that are also multiples of both 2 and 3. _____

5	6	7	8
15	16	17	18
25	26	27	28
35	36	37	38

Operation Building Blocks

Read each of the problems below. Draw a picture of how you could use building blocks to solve the problem. Write the equation and the answer. Explain what you drew and why on the blank lines.

Amanda grew two plants for the science fair. The first plant was eight centimeters tall. The second plant was three times as tall. How tall was the second plant?

A rabbit can go two feet in one jump. A kangaroo can go five times as far as a rabbit. How far can a kangaroo go in one jump?



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