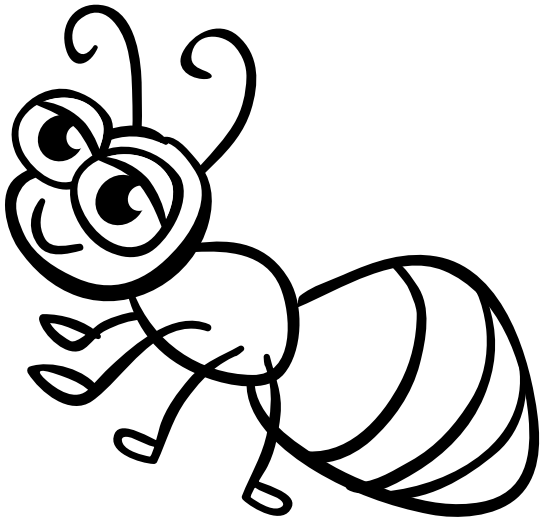
Ants Go Marching

3rd–5th Grade

Objectives



CCSS Math/Operations & Algebraic Thinking

- 3.OA.A.1: Interpret the products of whole numbers, e.g., interpret 5 x 7 as the total number of objects in 5 groups of 7 objects each. *For example, describe a context in which a total number of objects can be expressed as 5 x 7.*
- 3.OA.A.2: Interpret whole-number quotients of whole numbers, e.g., interpret 56 ÷ 8 as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. *For example, describe a context in which a number of shares or a number of groups can be expressed as 56 ÷ 8.*
- 3.OA.A.3: Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.

Materials Needed

- *One Hundred Hungry Ants* by Elinor Pinczes
- Ant counters or raisins
- Multiplication activity cards
- Ants Go Marching multiplication page (multiple copies for each student)

Introduction

Read aloud *One Hundred Hungry Ants* by Elinor Pinczes.

Procedure

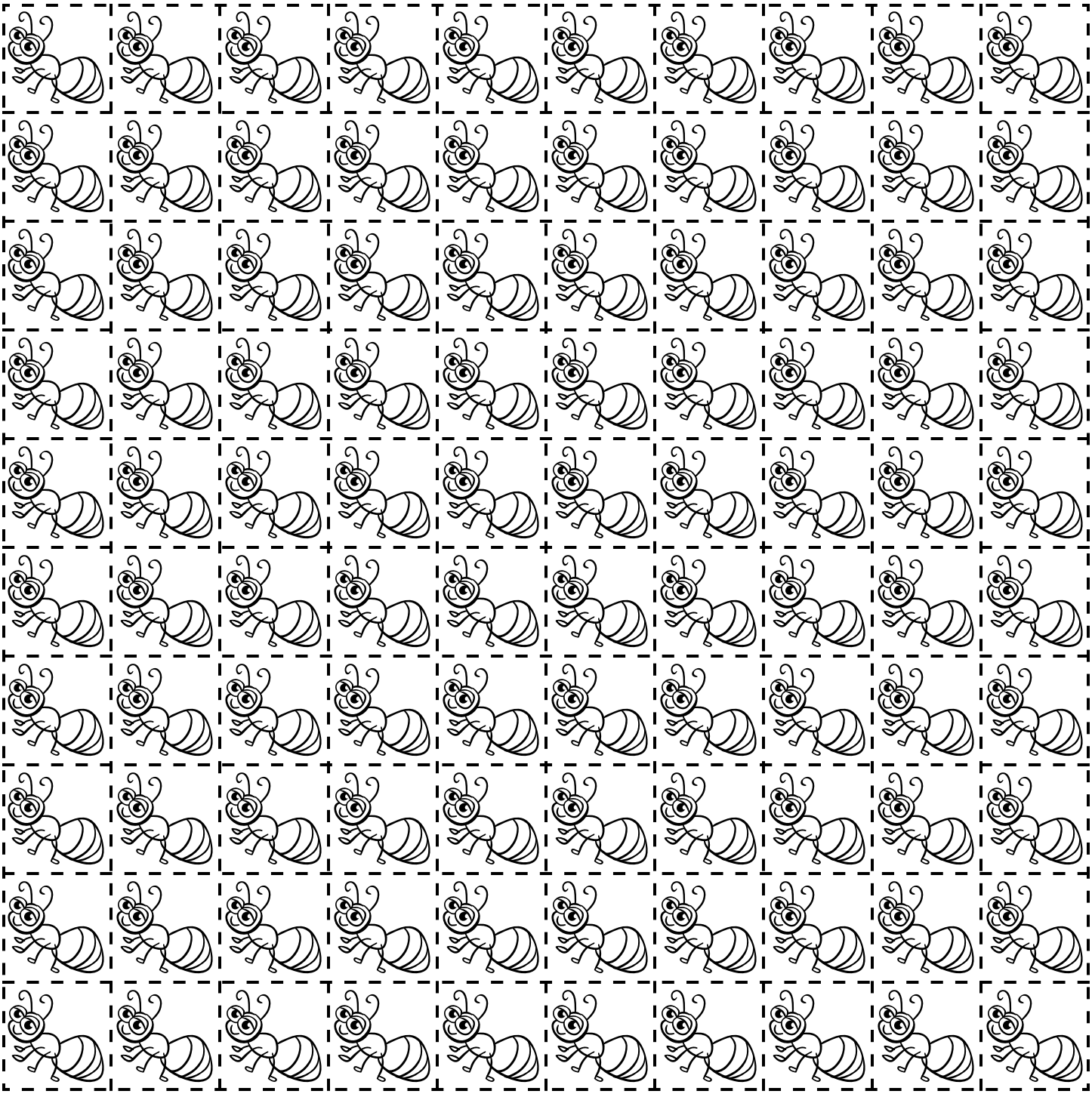
1. Pair students with a partner and tell them that they are going to explore different ways to show large groups of numbers so that the numbers are easier to count.
2. Give each pair of students a set of 100 ant counters (or raisins). Ask the students to arrange their counters in arrays that were shown in the story: 2 groups of 50, 4 groups of 25, 10 groups of 10 and so on.
3. Demonstrate that these groupings represent multiplication equations, such as 2 x 50 = 100, 4 x 25 = 100 or 10 x 10 = 100.
4. Ask students to work together to find another way to represent 100 (e.g., 5 groups of 20 or 20 groups of 5). What multiplication equation does this arrangement represent? (5 x 20 = 100 or 20 x 5 = 100)
5. Point out that they can also easily solve related division problems. For example, if we know that 2 groups of 10 equal 20, then we know that 20 ÷ 2 = 10. Similarly, if we know that 4 groups of 5 equal 20, then we know that 20 ÷ 5 = 4.

Guided Practice

1. Give students a copy of the Ants Go Marching multiplication page and their own set of counters (or raisins).
2. Challenge students to arrange 24 "ants" into an array.
3. Then have them write the multiplication problem that corresponds to the array.
4. Now challenge students to organize the ants to make two more different arrays. (For example, the student with 24 counters may arrange her counters in 4 rows of 6.) Be sure they understand that these arrays represent multiplication problems, such as 3 x 8 = 24 and 4 x 6 = 24.
5. Point out that division is a natural extension of multiplication. Since we know 3 x 8 = 24, we also know 24 ÷ 8 = 3 and 24 ÷ 3 = 8.
6. Ask students to complete the Ants Go Marching multiplication page by finding arrays for 48 and writing the corresponding multiplication problem.

Independent Practice

1. Place a set of multiplication activity cards and a set of counters in a learning center.
2. Challenge students to select a card and solve the question by using the counters to make a visual representation of the word problem, array or equation.



1

Nora got 4 dolls for her birthday. Each doll came with 4 dresses. How many dresses did Nora get in all?

2

6 cowboys went into town to buy new boots. Each cowboy bought 2 boots. How many boots did they buy in all?

3

Keisha owns 3 guitars. Each guitar has 6 strings. If all the strings break, how many new strings will Keisha need?

4

Amy made cookies for 6 friends. Each friend ate 5 cookies. How many cookies did her friends eat altogether?

5

Ms. Ling split her class into 3 teams. There were 8 students on each team. How many students were there in all?

6

The farmer has 7 horses. He gives each horse 3 apples a day. How many apples does he need each day?

Multiplication Activity Cards - Answers

1. $4 \times 4 = 16$
2. $6 \times 2 = 12$
3. $3 \times 6 = 18$
4. $6 \times 5 = 30$
5. $3 \times 8 = 24$
6. $7 \times 3 = 21$

Ants Go Marching

Name: _____

1. Use your ant counters to show 3 different arrays that equal 24. Draw the arrays below and write an equation for each.

2. Now use your ant counters to show 3 different arrays that equal 48. Draw the arrays below and write an equation for each.