Home Connections
Math Activities

Grade 5

Patterning and Algebra

Investigating Square Numbers
A Massive Puzzle

Investigating Square Numbers

Ask your child to show why 1, 4, 9, 16, 25, 36 are square numbers.

Example:

1 x 1 = 1 2 x 2 = 4 3 x 3 = 9 4 x 4 = 16 etc

Square numbers are formed by multiplying a number by itself. They are called square numbers because they can form a square when drawn as an array of dots (shown in example below)

Let's Talk About It

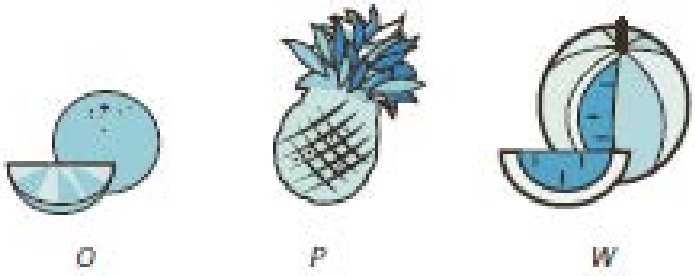
- If a square number is multiplied by another square number will the product (result) also be a square number?
- If a square number is multiplied by a non-square number what do you think the product (result) will be? Why?

A MASSive Puzzle

Task: Find the mass of an orange, a pineapple, and a watermelon.

1. Use the clues in the table to find the mass of each object. For example, using the first row we know that the combined mass of the oranges, pineapples, and watermelon is 17 kg. Use the other rows and columns to get more clues.

2. Write an algebraic equation to represent each relationship.
   For example: $O + P + W = 17$



We can use letters to represent an unknown. *P* represents the mass of the pineapple.

Let's Talk About It

- How did you solve the problem?
- What was challenging about this puzzle?

A MASSive Puzzle