

Lesson: My Dog Division

Lesson level: Grade 3-5

Vocab: quotient, average, sweet-tooth, square numbers

Lesson Aim: Discovering Square Numbers

My Dog Division uses the 4, 9, and 36 "dog treats" and arranges them into multiplicative arrays with the same dimensions on each side. He arranges:

4 into a 2×2 array

9 into a 3×3 array

36 into a 6×6 array

Activity:

On graph paper, ask students to draw arrays of dimensions:

1×1

2×2

3×3

4×4

5×5

6×6

What do the arrays have in common? (They all graph as squares)

(Square numbers are the numbers you get when you multiply a number by itself. Can students explain why they graph as square arrays?)

What are all the square numbers you get up to 12×12 ?

$$1^2 = 1$$

$$2^2 = 4$$

$$3^2 = 9$$

$$4^2 = 16$$

$$5^2 = 25$$

Why are square numbers called Square Numbers?