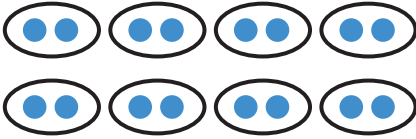
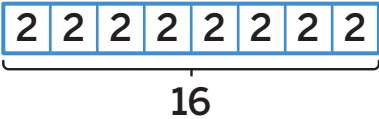


In this sub-unit . . .


- We worked with equal groups situations. We created drawings and diagrams to represent those situations.

Situation	Drawing	Strip Diagram
Diego has 8 piles of socks. Each pile has 2 socks.		

- We wrote multiplication expressions and equations to represent equal groups.

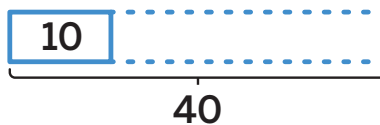
Expression
 8×2

Equation
 $8 \times 2 = 16$

 **Math tip:** The **factors** represent the number of groups and the number in each group. The **product** represents the total.

- We represented multiplication situations with equations, using symbols for the unknown values. Then we solved for the unknown values.



There are some boxes of crayons. Each box has 10 crayons in it. There are 40 crayons.



$? \times 10 = 40$
 I counted 10 four times, so I know $4 \times 10 = 40$. There are 4 boxes.

In this sub-unit . . .

- We discovered that **arrays** are related to equal groups and to multiplication. We represented arrays with expressions and equations.

Equal groups	Array
	
Expression	Equation
3×5	$3 \times 5 = 15$

🔥 **Math tip:** The rows and columns of arrays show equal groups. When representing arrays with expressions, you can think about the factors as the number of rows (or columns) and the number of objects in each row (or column).

- Using our understanding of arrays, we saw that we can multiply numbers in any order and still get the same product. This is called the **Commutative Property of Multiplication**.

$$3 \times 5 = 15$$

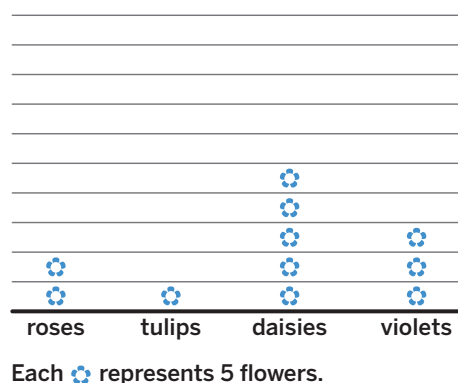
$$5 \times 3 = 15$$

$$3 \times 5 = 5 \times 3$$

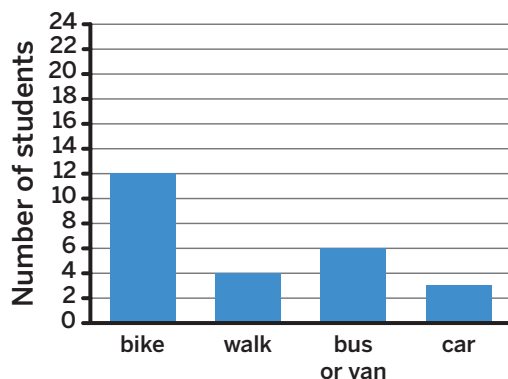
In this sub-unit . . .

- We created scaled pictographs and scaled bar graphs and chose which scale to use based on the data.

Flowers I Saw on the Way Home



How We Get Home



Math tip: When working with scaled pictographs, the key shows the scale. When working with scaled bar graphs, number labels show the scale.

- We solved one- and two-step problems about data represented on scaled bar graphs.

How many *more* ants are there than ladybugs and spiders combined?

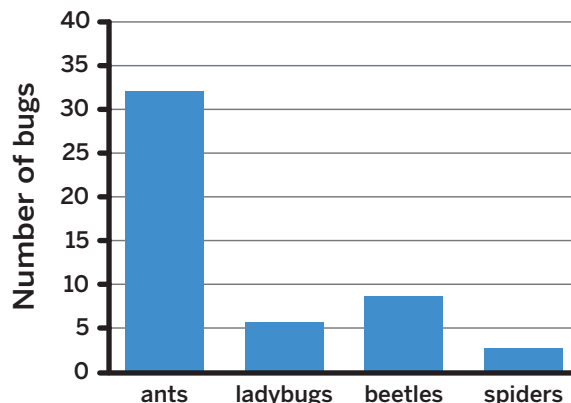
$$6 + 3 = 9$$

$$32 - 9$$

$$33 - 10 = 23$$

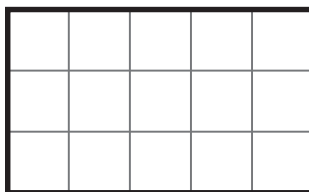
23 more ants

Types of Bugs in the Garden



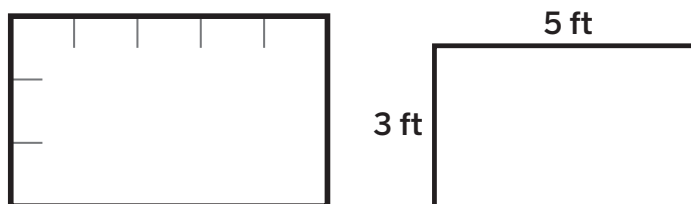
In this sub-unit . . .

- We explored the areas of rectangles with gridded squares. The equal groups of unit squares in rows and columns are similar to arrays and can be related to multiplication.



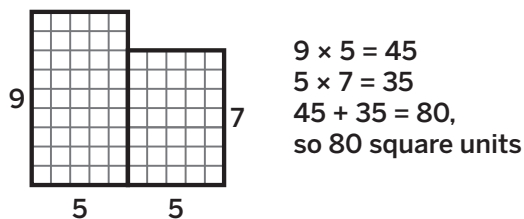
3 rows of 5 squares = 3×5

- We considered the area of rectangles without a grid, such as those showing tick marks or labeled side lengths.



Area: 15 square feet

- We saw that some figures could be decomposed into rectangles, so we calculated the area of the figure by adding the areas of the smaller rectangles.



Math tip: To determine the area of a figure made of rectangles, you calculate the area of the rectangles inside the figure and add those areas.