

MULTIPLICATION

Today's Destination

What does multiplication represent?

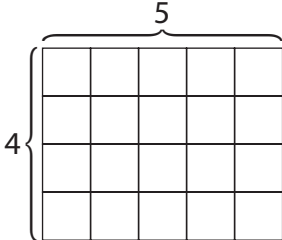


Vocabulary

Array A grid of squares or other objects arranged in equal rows

Multiplication An operation that represents putting equal groups together to get a total

For example:



4 rows of 5 equals 20

$$4 \times 5 = 20$$

factors
the numbers
you multiply

product
the total in a
multiplication
sentence



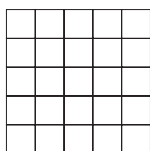
Problem of the Day



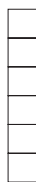
How many markers does Matt have in total? _____

A

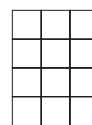
You can use an **array** to think about multiplication. An array is a grid with equal rows. These are arrays.



$$5 \times 5 = 25$$

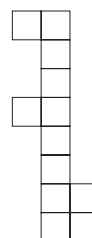
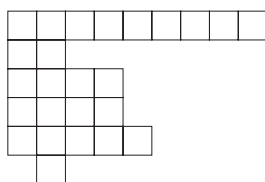


$$6 \times 1 = 6$$

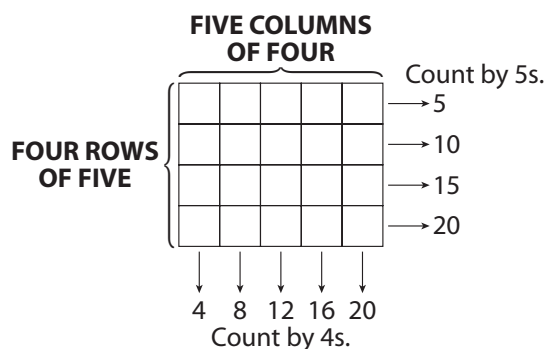


$$4 \times 3 = 12$$

If the rows or columns are not equal, the figure is not an array. These are NOT arrays.



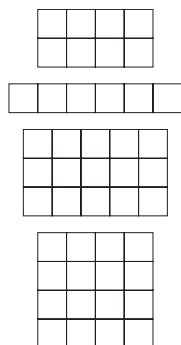
Counting the total number of small squares in an array is like putting equal groups together to get a total. That's multiplication. In an array, the number of rows times the number of columns equals the total number of small squares in the array. Notice that the number of columns times the number of rows will give the same total.



← This array can represent
 $4 \times 5 = 20$ or $5 \times 4 = 20$.

Try It
Out!

Match each array to the multiplication sentence it shows.



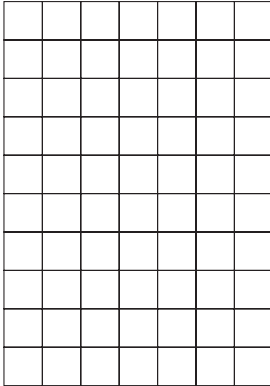
$$3 \times 5 = 15$$

$$2 \times 4 = 8$$

$$4 \times 4 = 16$$

$$1 \times 6 = 6$$

6)



Write It!



7) Draw an array to show 2 times 7. Count the squares to find the product.



Write It!



8) Draw an array to show 3 times 9. Count the squares to find the product.



Write It!



9) Ms. Liu's classroom has 3 rows of chairs. Each row has 5 chairs. What is the total number of chairs?



Compute It!