

Grade 2 - Arrays and Equal Groups - Lesson

Common Core 2.OA.C.4 · maths-pdf.fr/en/

This **arrays lesson** for 2nd Grade covers arrays and equal groups (Common Core 2.OA.C.4), with a free PDF to print.

An array is a set of objects arranged in equal rows and equal columns, like an egg carton. To find the total, use repeated addition: write the number in one row once for each row and add. An array with 3 rows of 4 gives $4 + 4 + 4 = 12$. Adding the columns gives the same total.

Grade 2 · Common Core State Standards: **2.OA.C.4**

Key facts in this arrays lesson

Key facts

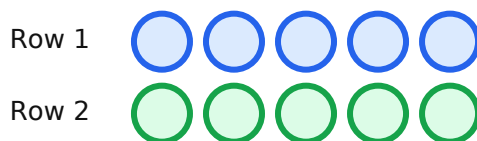
- Rows go across and columns go up and down.
- Repeated addition adds the same number again and again: $4 + 4 + 4 = 12$.
- Grade 2 arrays have up to 5 rows and up to 5 columns.
- Adding the rows or adding the columns gives the same total.
- Equal groups, such as 4 bags of 5, can be added the same way.

What is an array?

Look at an egg carton, a muffin tin, or the windows on a school wall. Things are lined up neatly, with the same number in every line. That picture is called an array.

Array

An **array** arranges objects in equal **rows** and **columns**. Rows go across, from left to right. Columns go up and down.



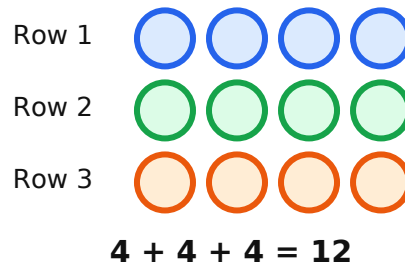
2 rows, 5 columns

An egg carton is an array: 2 rows and 5 columns.

This array has 2 rows. Each row has 5 circles, so it also has 5 columns.

How do you find the total with repeated addition?

Add the number in each row. Every row has the same number, so the numbers you add are equal. These are called **equal addends**.



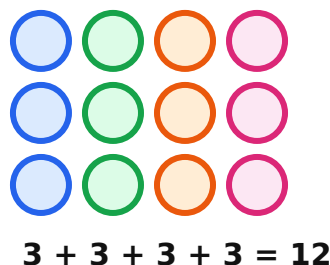
Add the rows: $4 + 4 + 4 = 12$.

The array has 3 rows with 4 in each row. Write the sentence $4+4+4=12$. There are 12 circles in all.

Rows	Columns	Add the rows
2	3	$3+3=6$
3	3	$3+3+3=9$
4	5	$5+5+5+5=20$
5	2	$2+2+2+2+2=10$

Can you add the columns instead?

Yes. Count the columns, and add the number in each column. You get the same total.

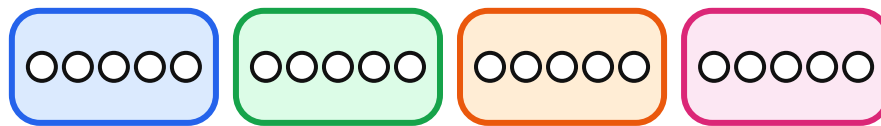


Add the columns: $3 + 3 + 3 + 3 = 12$. The total stays the same.

Now there are 4 columns with 3 in each: $3+3+3+3=12$. Adding rows or columns gives 12 both times.

Equal groups

Equal groups are sets with the same number of objects. Four bags with 5 counters in each bag make an array when you line the bags up as rows.



$$5 + 5 + 5 + 5 = 20$$

Equal groups: 4 bags with 5 counters in each bag.

The bags give $5+5+5+5=20$. There are 20 counters.

1. Count the rows.
2. Count how many are in one row.
3. Write that number once for each row, with plus signs between.
4. Add to find the total.

Worked example. A bus has 4 rows of seats with 2 seats in each row. Write $2+2+2+2$. Two and two make 4, 4 and 2 make 6, and 6 and 2 make 8. The bus has **8 seats**.

Arrays lesson: questions and answers

What is the difference between a row and a column?

A row goes across, from left to right. A column goes up and down. In a 3 by 4 array there are 3 rows and 4 columns.

How do I write an equation for an array?

Count the objects in one row, then write that number once for each row with plus signs. For 2 rows of 5, write $5+5=10$.

What are equal addends?

Equal addends are the numbers you add that are all the same. In $3+3+3=9$ every addend is 3.

Does it matter if I add rows or columns?

No, the total is the same. A 3 row by 5 column array gives $5+5+5=15$ by rows and $3+3+3+3+3=15$ by columns.

How big can an array be in Grade 2?

Second graders work with up to 5 rows and up to 5 columns. The biggest array has 25 objects, shown by $5+5+5+5+5=25$.

How to use this arrays lesson

Read the definitions first, then follow the worked method line by line and redo the example on paper without looking. When every step makes sense, move on to the worksheet, then check yourself with the quiz.

Download the arrays lesson as a PDF with the button below and keep it with your notes.