

How to use these slides to help your child:

1. **Recall:** Help your child to read what the question is and then leave them to try and answer the question by themselves. Recall is helpful to find out what you child already knows/ can already do so you know how much support to give them.
2. **Learning objective:** Read the learning objective together and discuss the learning habits you might need to use throughout. (discipline, resilience, imagination, collaboration, curiosity).
3. **Guided practice:** These are problems that should be done together. Guide the children to help them to find answers by showing them the most effective way to work things out. Perhaps show them how to work the first one out, work the second one out together and finally let your child work the last guided practice question out. If they get stuck, go back to the first one and work it out together again.

4. Intelligent practice: These are worksheet questions that the children should be able to work out by themselves after going through the guided practice. If they need support or a reminder or how to do it then that's absolutely fine but try not to just give them the answers. Remember- mistakes are good because we learn from them.

5. Dive deeper: This is a question that might be more open ended. It might require an explanation of how they know they are correct. This could be done by proving their answer through showing their working out. Read this question with your child and talk about how best to answer it.

6. Answers: Its really important to go through the answers with your child. Give them a pen and let them tick their answers. If they get an answer wrong, now is the opportunity to look at the correct answer and identify together where they went wrong and how to fix it.

Recall

Can you put pens into equal groups and then add the groups to find out how many there are altogether?

(You could do this practically with household objects to help)



What are we learning?

L.O. To understand what an array is and how they help us.

How will we learn it?

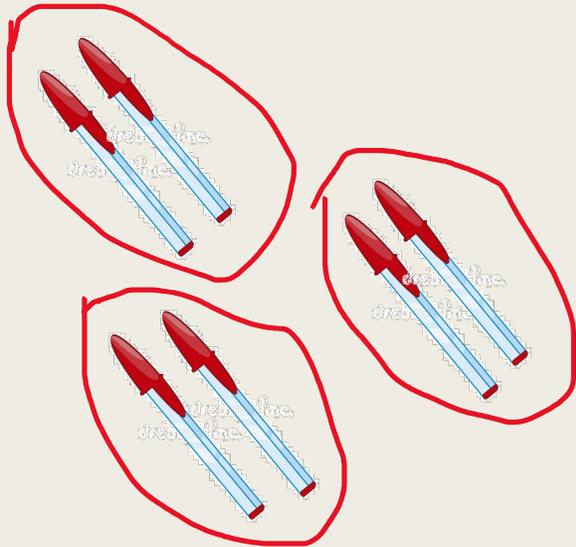
By looking at examples and creating our own.

Learning habits: Resilience and discipline.

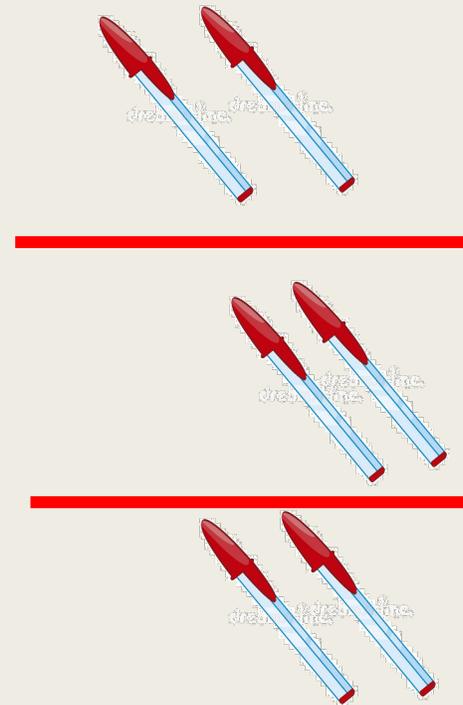
Guided practice

What is an array?

- Arrays are when we take our equal groups and put them in columns and rows.
- This makes it easier to see our groups and understand what our multiplication would be.
- It is a lot clearer. E.g
- Instead of:

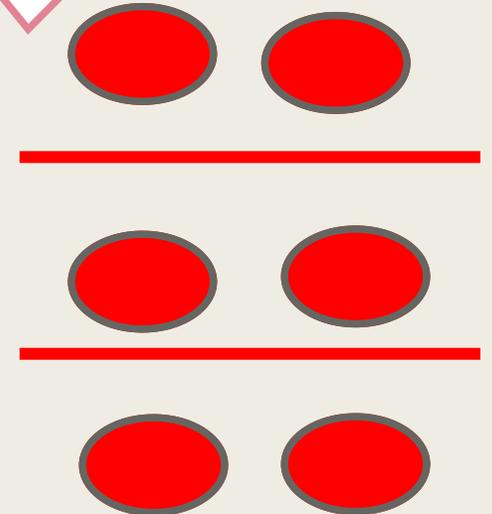


we do:

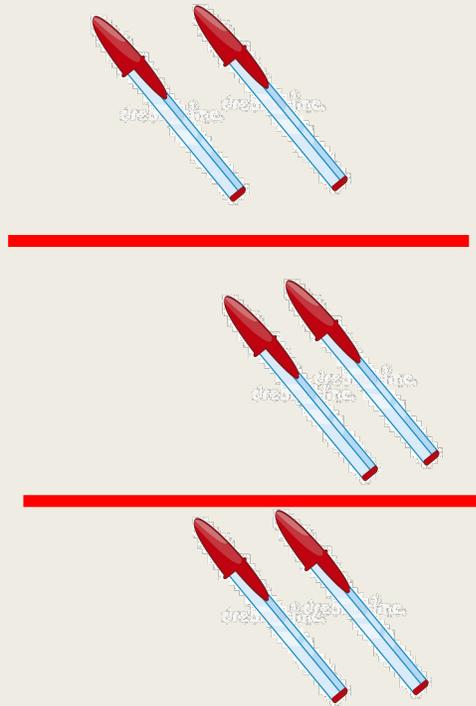


The 3 rows represent the 3 groups

or



Guided practice



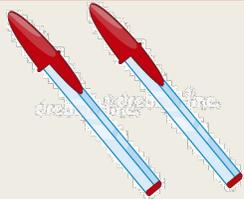
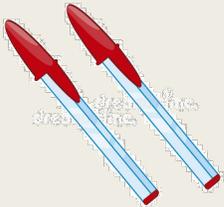
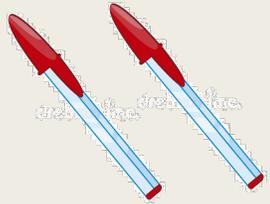
The 3 rows
represent the
3 groups

The pens in each
row represent how
many there are in
each group.

Because there are 3 rows
and there are 2 pens in
each row; we can find out
how many there are
altogether by multiplying
the number of rows by the
amount in each row:

$$3 \times 2 = 6.$$

Guided practice



The 3 rows
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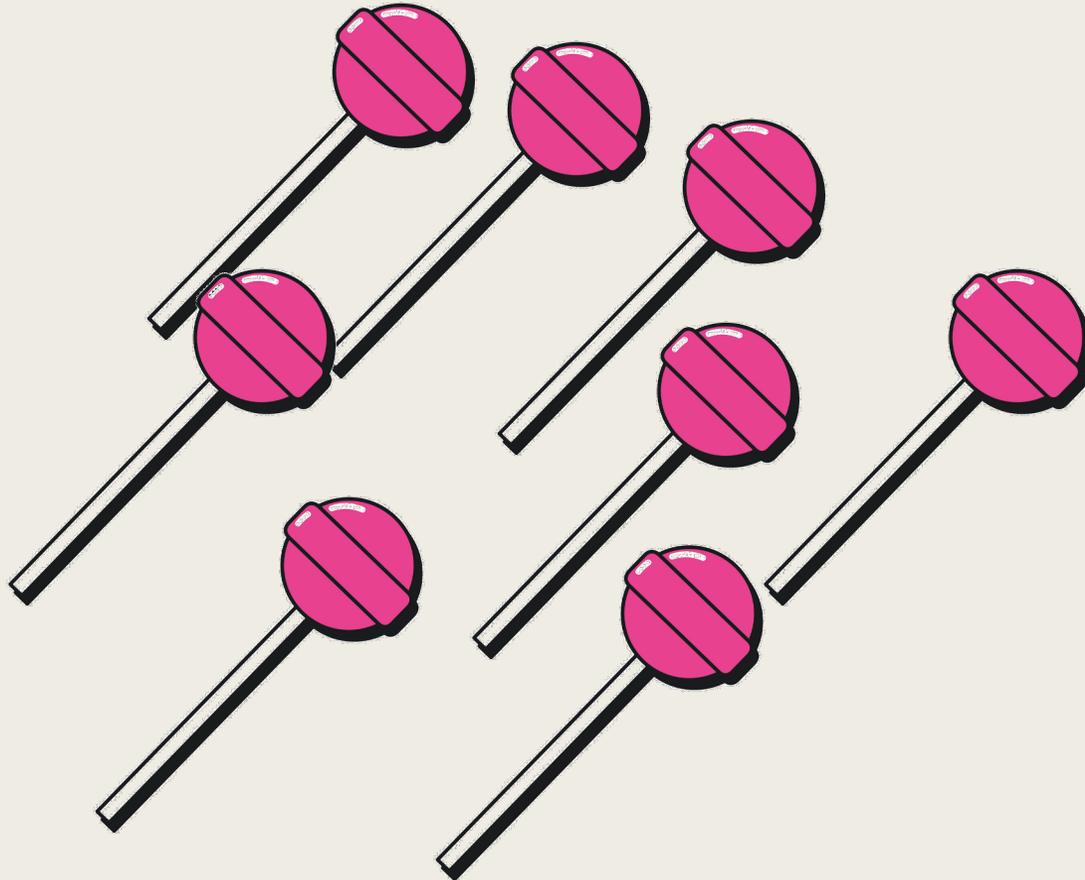
Because there are 3 rows
and there are 2 pens in
each row; we can find out
how many there are
altogether by multiplying
the number of rows by the
amount in each row:

$$3 \times 2 = 6.$$

We can check our
answer by counting
each pen.
Did our multiplication
calculation work?

Guided practice

Can you group these items into an array?



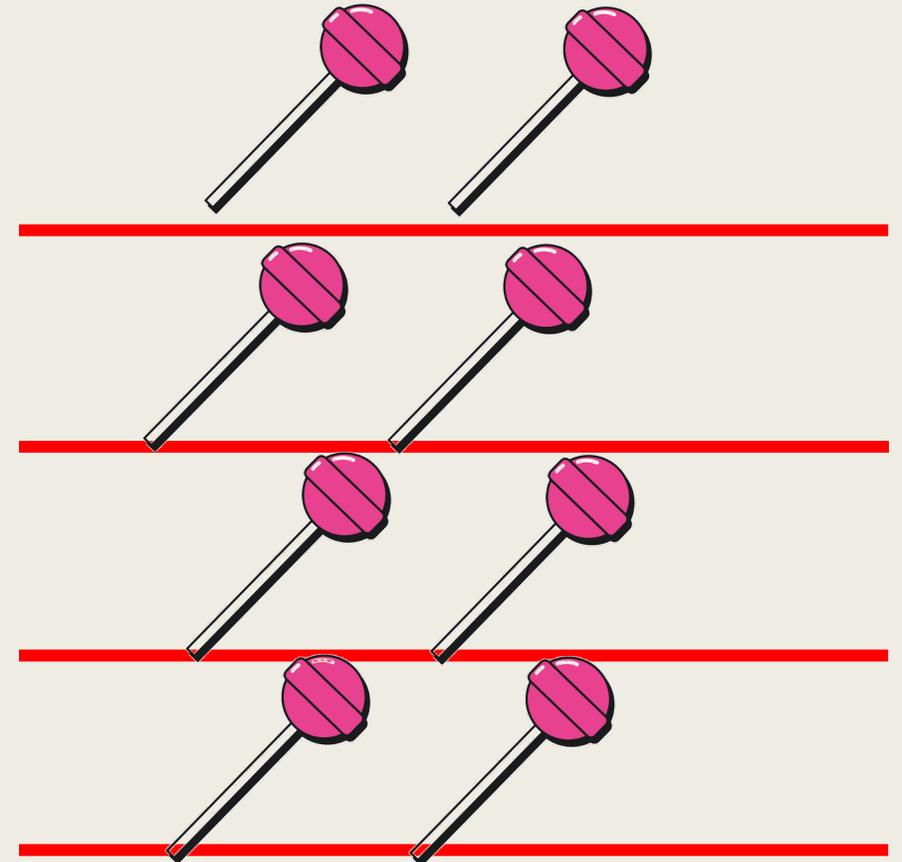
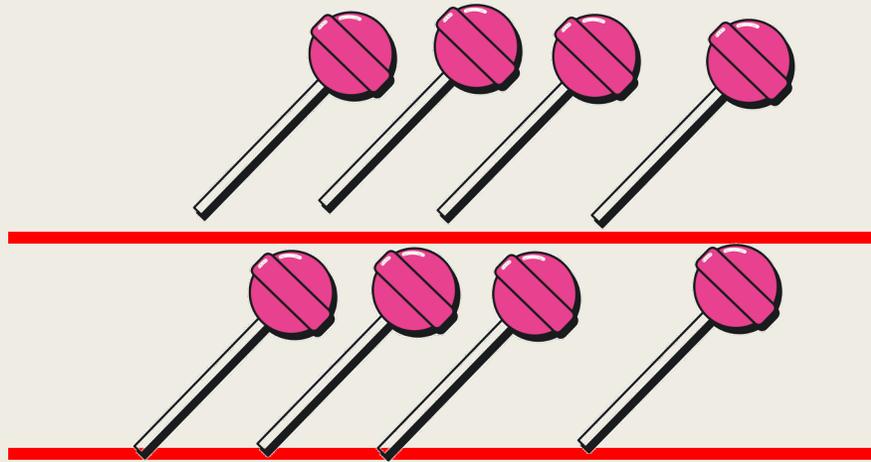
Guided practice

Good we could have had:

Two rows of 4

or

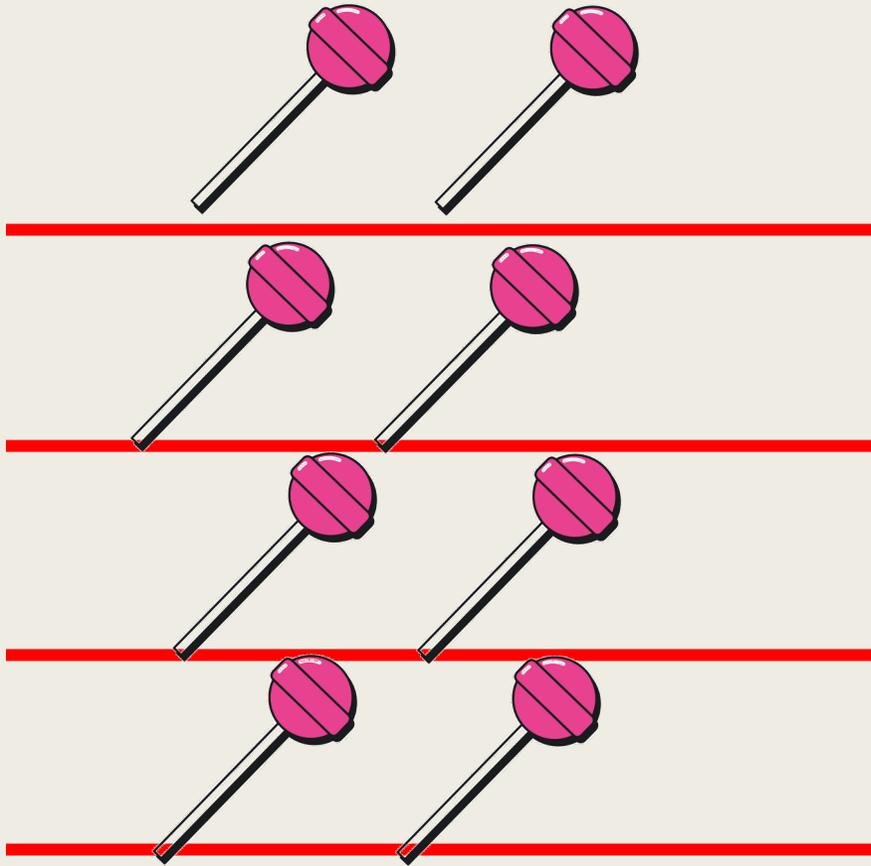
4 rows of 2



They both create calculations
which give the same answer:
 4×2 or $4 + 4$ or 2×4 or $2 + 2 + 2 + 2$

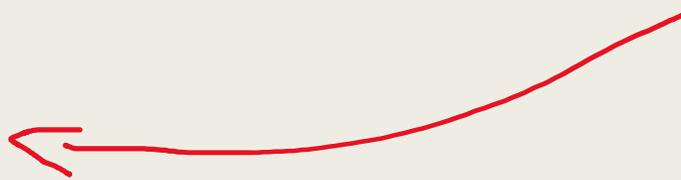
Guided practice

Now that we understand what rows are, we can look at columns.



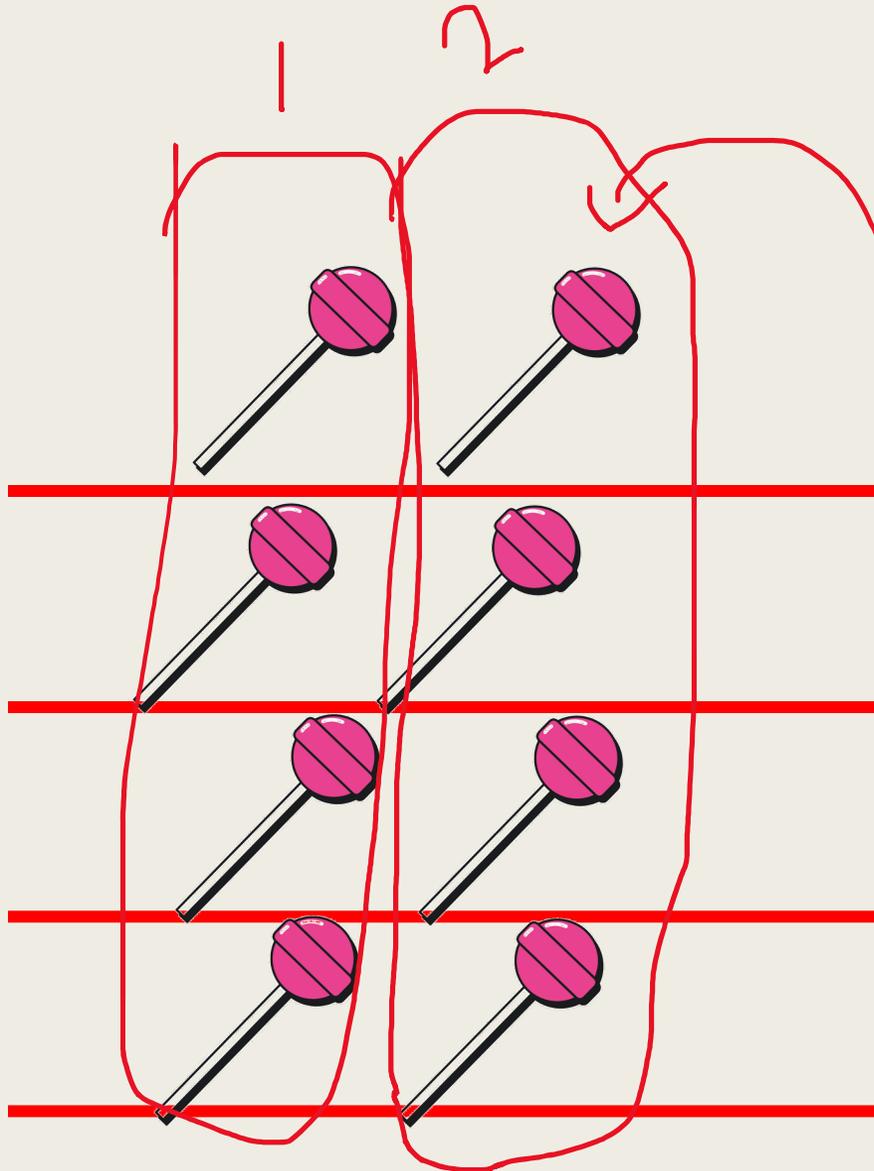
Instead of drawing two sets of rows to show the possible groups. We can use one array to show the possibilities.

We know that this has 4 rows (go across from right to left)- it shows 4 groups of 2.



Guided practice

Now that we understand what rows are, we can look at columns.



It also shows two groups of 4 from its columns.
Columns are vertical and go up and down.

So this one array shows:

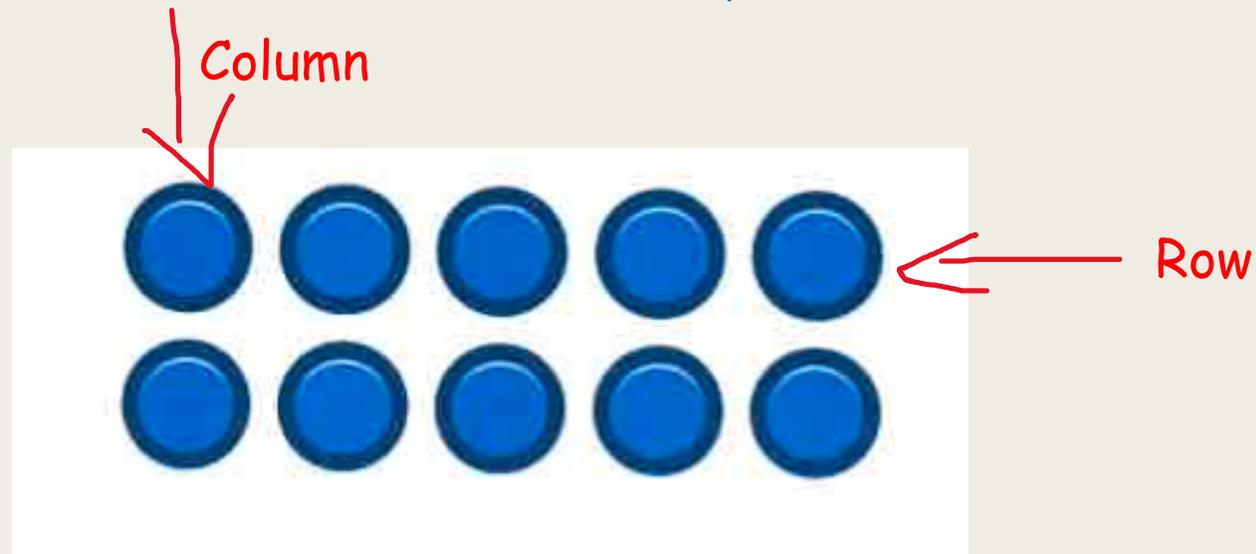
Rows= 4 groups of 2

Columns= 2 groups of 4

Both will give us the answer of 8 lollies altogether.

Guided practice

Have a go at filling in these sentences about this array, I've labelled it to help you.



There are rows.

There are counters in each row.

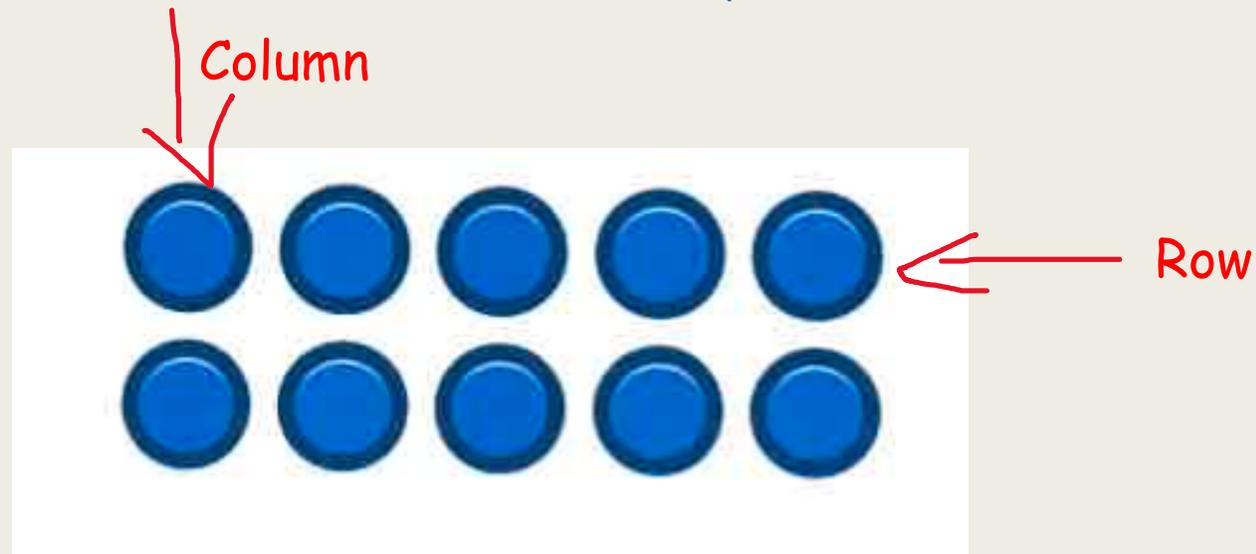
There are columns.

There are counters in each column.

There are counters in the array.

Guided practice

Have a go at filling in these sentences about this array, I've labelled it to help you.



There are rows.

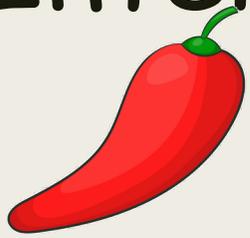
There are counters in each row.

There are columns.

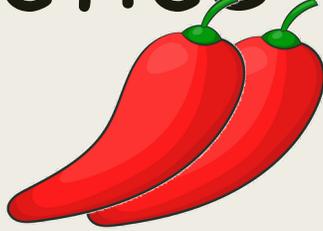
There are counters in each column.

There are counters in the array.

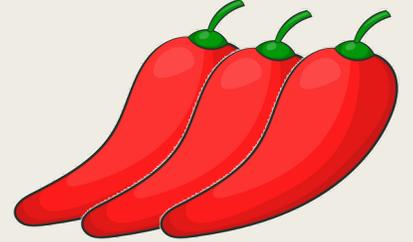
Intelligent practice



$$2 + 2 + 2 + 2 =$$



$$4 + 4 =$$



$$4 \times 2 =$$

$$5 + 5 + 5 =$$

$$3 + 3 + 3 + 3 + 3 =$$

$$3 \times 5 =$$

$$10 + 10 =$$

$$2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 =$$

$$2 \times 10 =$$

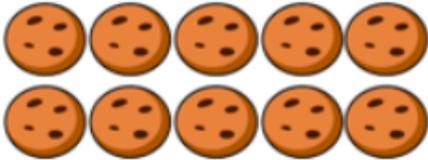
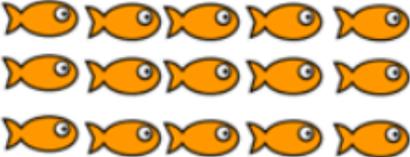
Use the number line to help you work out any answers or use your ten frames or counting objects

Challenge: What do you notice about your answers?



Dive deeper 1:

Complete the table.

Array	Description - columns	Description - rows	Totals
	5 columns 2 cookies in each column	2 rows 5 cookies in each row	$2 + 2 + 2 + 2 + 2 = 10$ $5 + 5 = 10$
	___ columns ___ donuts in each column	___ rows ___ donuts in each row	
	___ columns ___ fish in each column	___ rows ___ fish in each row	

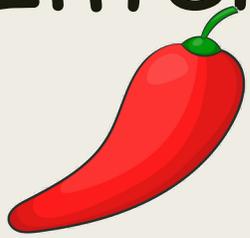
Dive deeper 2:

Amir and Whitney are making arrays.

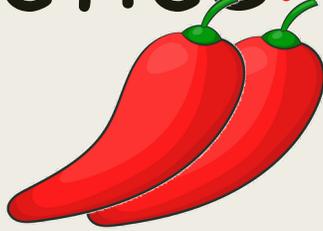


Who has made a mistake? Explain why.

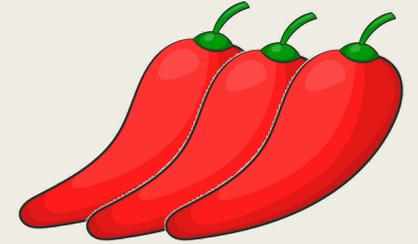
Intelligent practice: Answers



$$2 + 2 + 2 + 2 = 8$$



$$4 + 4 = 8$$



$$4 \times 2 = 8$$

$$5 + 5 + 5 = 15$$

$$3 + 3 + 3 + 3 + 3 = 15$$

$$3 \times 5 = 15$$

$$10 + 10 = 20$$

$$2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 = 20$$

$$2 \times 10 = 20$$

Use the number line to help you work out any answers or use your ten frames or counting objects

Challenge: What do you notice about your answers?

The calculations in each chilli are a different way of writing it to find the answer:

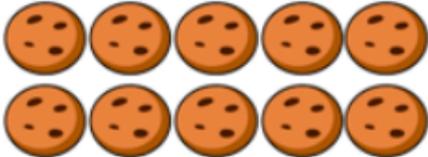
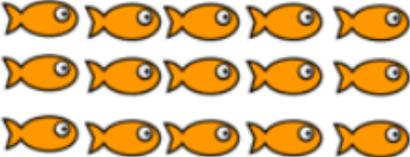
$2+2+2+2$ is showing 4 groups of 2

$4+4$ is showing 2 groups of 4.

Both are the same as writing 4×2 . They give the same answer

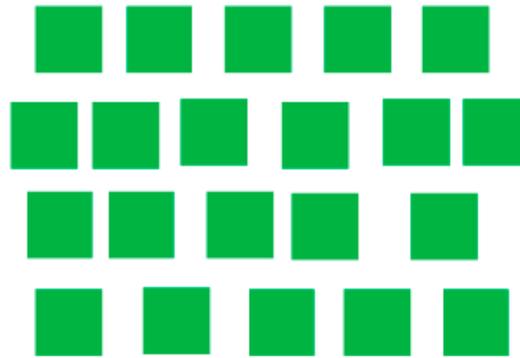
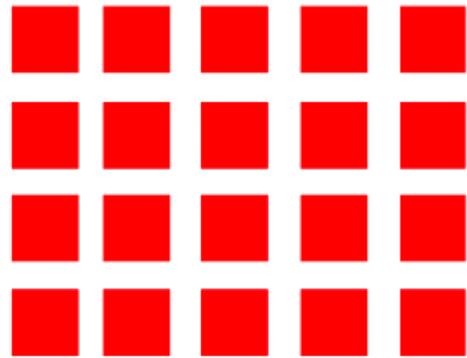
Dive deeper 1: **Answers**

Complete the table.

Array	Description - columns	Description - rows	Totals
	5 columns 2 cookies in each column	2 rows 5 cookies in each row	$2 + 2 + 2 + 2 + 2 = 10$ $5 + 5 = 10$
	<u>2</u> columns <u>4</u> donuts in each column	<u>4</u> rows <u>2</u> donuts in each row	$4 + 4 = 8$ $2 + 2 + 2 + 2 = 8$ Challenge = 4×2
	<u>5</u> columns <u>3</u> fish in each column	<u>3</u> rows <u>5</u> fish in each row	$3 + 3 + 3 + 3 + 3 = 15$ $5 + 5 + 5 = 15$ Challenge: $3 \times 5 = 15$

Dive deeper 2:

Amir and Whitney are making arrays.



Who has made a mistake? Explain why.

Whitney has made a mistake because her array is not in accurate columns.

There are an unequal amount of squares in each row.

It is very important that when you are making arrays that you are accurate and place each object under the other, just like Amir has.