

# ★ Arrays

Children begin to make arrays by making equal groups and building them up in columns or rows. They use a range of concrete and pictorial representations alongside sentence stems to support their understanding.

Array 30 Complete the table.

Array	Columns	Rows
	6 columns 2 cookies in each column	2 rows 6 cookies in each row
	___ columns ___ balls in each column	___ rows ___ balls in each row
	___ columns ___ faces in each column	___ rows ___ faces in each row
	___ columns ___ hearts in each column	___ rows ___ hearts in each row

On this sheet, they look at rows and columns only in their table.

# ★★ Arrays

Children begin to make arrays by making equal groups and building them up in columns or rows. They use a range of concrete and pictorial representations alongside sentence stems to support their understanding.

Array 30 Complete the table.

Array	Columns	Rows	Adding
	6 columns 2 cookies in each column	2 rows 6 cookies in each row	$2 + 2 + 2 + 2 + 2 + 2 = 12$ $6 + 6 = 12$
	___ columns ___ balls in each column	___ rows ___ balls in each row	
	___ columns ___ faces in each column	___ rows ___ faces in each row	
	___ columns ___ hearts in each column	___ rows ___ hearts in each row	
	___ columns ___ rectangles in each column	___ rows ___ rectangles in each row	

On this sheet, they look at rows and columns and also fill in the repeated addition sentence.

# ★★★ Arrays

On this sheet, children fill in missing parts of the table, which includes drawing arrays using the given clues.

Array 30 Complete the table.

Array	Columns	Rows	Adding
	6 columns 2 cookies in each column	2 rows 6 cookies in each row	$2 + 2 + 2 + 2 + 2 + 2 = 12$ $6 + 6 = 12$
	___ columns ___ balls in each column	___ rows ___ balls in each row	$3 + 3 + 3 + 3 + 3 + 3 = \underline{\quad}$ $7 + 7 + 7 = \underline{\quad}$
	___ columns ___ faces in each column	___ rows ___ faces in each row	
	5 columns 3 hearts in each column	___ rows ___ hearts in each row	

# Arrays Reasoning and Problem Solving

My array has the most because it has the most rows.

Mal

Who do you agree with? Why?

My array has the most because it has the most columns.

Esin




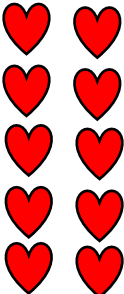
The children are writing number sentences to describe the array. Who do you agree with? Circle them.

$4 + 4 + 4 + 4$        $3 + 3 + 3 + 3$




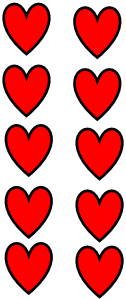
$3 + 3 + 3$       Explain your answer.       $4 + 4 + 4$

Children continue to develop their understanding of arrays by answering reasoning tasks.



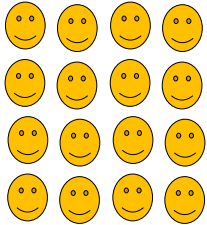
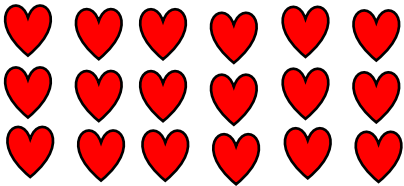
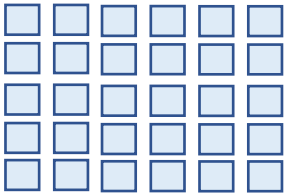
Complete the table.

Array	Columns	Rows
	6 columns 2 cookies in each column	2 rows 6 cookies in each row
	___ columns ___ balls in each column	___ rows ___ balls in each row
	___ columns ___ faces in each column	___ rows ___ faces in each row
	___ columns ___ hearts in each column	___ rows ___ hearts in each row



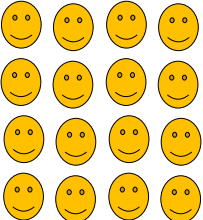
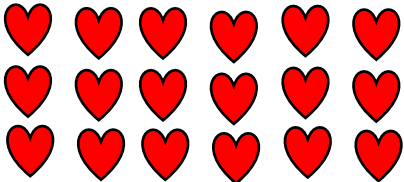
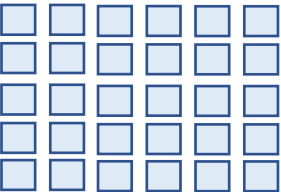
Complete the table.

Array	Columns	Rows
	6 columns 2 cookies in each column	2 rows 6 cookies in each row
	<u>5</u> columns <u>3</u> balls in each column	<u>3</u> rows <u>5</u> balls in each row
	<u>2</u> columns <u>4</u> faces in each column	<u>4</u> rows <u>2</u> faces in each row
	<u>2</u> columns <u>5</u> hearts in each column	<u>5</u> rows <u>2</u> hearts in each row


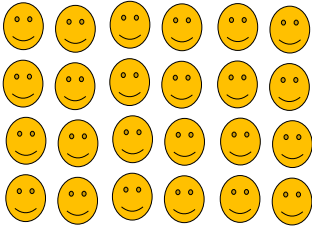
Complete the table.

Array	Columns	Rows	Adding
	6 columns 2 cookies in each column	2 rows 6 cookies in each row	$2 + 2 + 2 + 2 + 2 + 2 = 12$ $6 + 6 = 12$
	___ columns ___ balls in each column	___ rows ___ balls in each row	
	___ columns ___ faces in each column	___ rows ___ faces in each row	
	___ columns ___ hearts in each column	___ rows ___ hearts in each row	
	___ columns ___ rectangles in each column	___ rows ___ rectangles in each row	



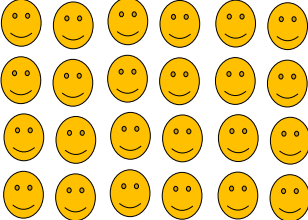
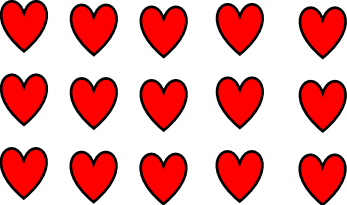
Complete the table.

Array	Columns	Rows	Adding
	6 columns 2 cookies in each column	2 rows 6 cookies in each row	$2 + 2 + 2 + 2 + 2 + 2 = 12$ $6 + 6 = 12$
	<u>6</u> columns <u>3</u> balls in each column	<u>3</u> rows <u>6</u> balls in each row	$6 + 6 + 6 = 18$ $3 + 3 + 3 + 3 + 3 + 3 = 18$
	<u>4</u> columns <u>4</u> faces in each column	<u>4</u> rows <u>4</u> faces in each row	$4 + 4 + 4 + 4 = 16$ $4 + 4 + 4 + 4 = 16$
	<u>6</u> columns <u>3</u> hearts in each column	<u>3</u> rows <u>6</u> hearts in each row	$6 + 6 + 6 = 18$ $3 + 3 + 3 + 3 + 3 + 3 = 18$
	<u>6</u> columns <u>5</u> rectangles in each column	<u>5</u> rows <u>6</u> rectangles in each row	$6 + 6 + 6 + 6 + 6 = 30$ $5 + 5 + 5 + 5 + 5 + 5 = 30$

Complete the table.

Array	Columns	Rows	Adding
	6 columns 2 cookies in each column	2 rows 6 cookies in each row	$2 + 2 + 2 + 2 + 2 + 2 = 12$  $6 + 6 = 12$
	___ columns  ___ balls in each column	___ rows  ___ balls in each column	$3 + 3 + 3 + 3 + 3 + 3 + 3 = \underline{\quad}$  $7 + 7 + 7 = \underline{\quad}$
	___ columns  ___ faces in each column	___ rows  ___ faces in each column	
	5 columns  3 hearts in each column	___ rows  ___ hearts in each row	

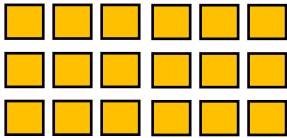
Complete the table.

Array	Columns	Rows	Adding
	6 columns 2 cookies in each column	2 rows 6 cookies in each row	$2 + 2 + 2 + 2 + 2 + 2 = 12$ $6 + 6 = 12$
	<u>7</u> columns <u>3</u> balls in each column	<u>3</u> rows <u>7</u> balls in each column	$3 + 3 + 3 + 3 + 3 + 3 + 3 = 21$ $7 + 7 + 7 = 21$
	<u>6</u> columns <u>4</u> faces in each column	<u>4</u> rows <u>6</u> faces in each column	$4 + 4 + 4 + 4 + 4 + 4 = 24$ $6 + 6 + 6 + 6 = 24$
	5 columns 3 hearts in each column	3 rows 5 hearts in each row	$3 + 3 + 3 + 3 + 3 = 15$ $5 + 5 + 5 = 15$

My array has the most because it has the most rows.



Mal

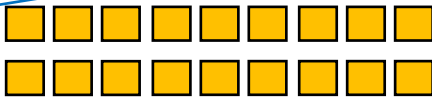


Who do you agree with?  
Why?

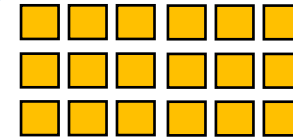
My array has the most because it has the most columns.



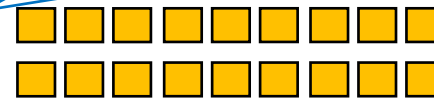
Esin



My array has the most because it has the most rows.



My array has the most because it has the most columns.



The children are writing number sentences to describe the array.  
Who do you agree with? Circle them.



$$4 + 4 + 4 + 4$$



$$3 + 3 + 3 + 3$$



$$3 + 3 + 3$$

Explain your answer.



$$4 + 4 + 4$$

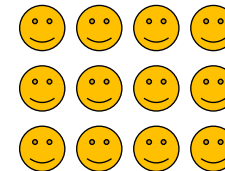
The children are writing number sentences to describe the array.  
Who do you agree with? Circle them.



$$4 + 4 + 4 + 4$$



$$3 + 3 + 3 + 3$$



$$3 + 3 + 3$$

Explain your answer.

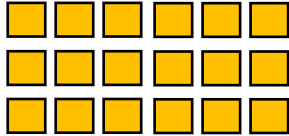


$$4 + 4 + 4$$

My array has the most because it has the most rows.



Mal

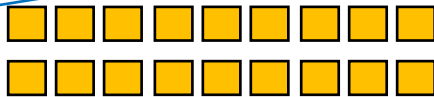


I don't agree with either of them.  
They have the same amount.  
Arrays can have different amounts  
of rows and columns.

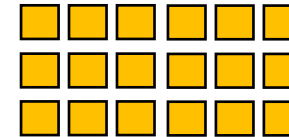
My array has the most because it has the most columns.



Esin

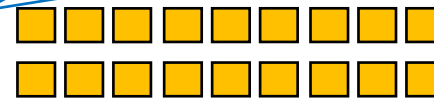


My array has the most because it has the most rows.



I don't agree with either of them.  
They have the same amount.  
Arrays can have different amounts  
of rows and columns.

My array has the most because it has the most columns.



The children are writing number sentences to describe the array.  
Who do you agree with? Circle them.



$4 + 4 + 4 + 4$



$3 + 3 + 3 + 3$



$3 + 3 + 3$

Explain your answer.

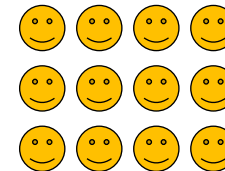


$4 + 4 + 4$

The children are writing number sentences to describe the array.  
Who do you agree with? Circle them.



$4 + 4 + 4 + 4$



$3 + 3 + 3 + 3$



$3 + 3 + 3$

Explain your answer.



$4 + 4 + 4$