



Maths

Multiplication and Division

Need a coherently planned sequence of lessons to complement this resource?

Lesson Breakdown

Below is our suggestion for the most coherent and progressive sequence to teach this area of Planit Maths steps on the White Rose Maths scheme of learning although we have not aimed to mirror the exact order in which the White Rose Maths scheme of learning is presented.

Groups (1): Equal and Unequal Groups

This fantastic lesson builds on children's prior experience of grouping, fair sharing and how to identify equal and unequal groups. The children will be given the chance to become fluent before moving on to reasoning about multiplication and division.

NC Statement: Pupils work with a range of materials and contexts in which multiplication and division relate to grouping and sharing discrete and continuous quantities, to arrays and to repeated addition. (Please note this is a non-statutory aim)

Lesson Aim: To identify equal and unequal groups.

Groups (2): Describing Equal Groups

This magical themed lesson coaches children through describing equal groups. They say how many equal groups there are and how many objects in each group. This lesson can be used to support children's understanding of multiplication and division.

NC Statement: Pupils work with a range of materials and contexts in which multiplication and division relate to grouping and sharing discrete and continuous quantities, to arrays and to repeated addition. (Please note this is a non-statutory aim)

Lesson Aim: To describe equal groups.

Introduction

These lessons introduce the children to multiplication and division facts leading to instant recall and use of inverse operations. Children begin with practical grouping before using skip counting, number lines and eventually learning number facts. Children write multiplication and division expressions and calculations using a range of stimulus resources to deepen understanding of these concepts. They explore and reason about commutativity, solve problems and use a variety of models and images to demonstrate their thinking.

Solve It Lesson Pack: Repeated Rectangles Using their knowledge of multiplication, can children break rectangles into different chunks to help them calculate mentally? Children break up rectangles in different ways to build up their knowledge of multiplicative reasoning. They reason about what they have noticed and apply this to multiplying large numbers.

Assessment Statements

by the end of this unit:

children working towards the expected level will be able to:

- sort objects into equal groups and recognise equal and unequal groups;
- count fluently in twos, fives and tens from zero and keep track of their count to multiply;
- use equipment and different models and images to demonstrate multiplication and division;
- use equipment and different models and images to solve simple multiplication and division problems;
- recognise odd and even numbers up to 20 and explain the difference between them;
- know some doubles and halves of numbers.

children working at the expected level will be able to:

- recall and use multiplication and division for two, five and ten times tables;
- recognise odd and even numbers up to 100 reasoning to explain how to identify larger or even numbers;
- write expressions and calculations using the multiplication (\times), division (\div) and equals ($=$);
- understand that multiplication is commutative that division is not;
- demonstrate that multiplication and division are inverse;
- recall doubles and halves of numbers up to 100;
- link doubling and halving to multiplying and dividing by two and use this to solve problems;

Multiplication and Division

Maths Year 21 Steps to Progression Overview

The aim of this overview is to support teachers using Planit Maths to show the most coherent and progressive sequence to teach each area of maths. We also want to fully support teachers who use the White Rose Maths scheme of learning to make full use of the resources available within Planit Maths. Wherever possible, lesson packs have been matched to each of the small steps on the White Rose Maths scheme of learning.

Yearly Overview

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place Value					Number: Addition and Subtraction				Measurement: Money		Number: Multiplication and Division
Spring	Number: Multiplication and Division		Statistics		Geometry: Properties of Shape			Number: Fractions		Measurement: Length and Height		
Summer	Position and Direction		Problem Solving and Efficient Methods		Measurement: Time		Measurement: Mass, Capacity and Temperature			Investigations		

See our [Multiplication and Division Steps to Progression](#) document.

Twinkl Planit is our award-winning scheme of work with over 4000 resources.



Multiplication Expressions



$$3 \times 2$$

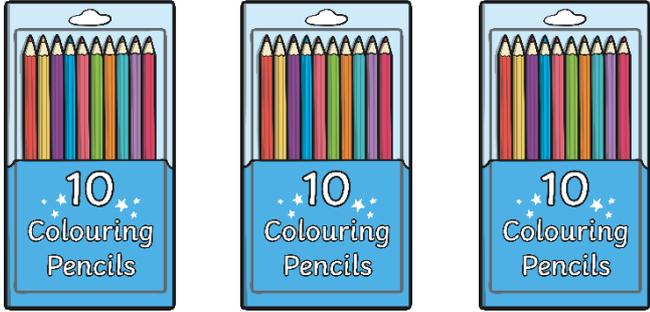
Aim

- To write multiplication expressions using the 'x' symbol.

Success Criteria

- I can write a repeated addition expression as a multiplication expression.
- I can write multiplication expressions when the group size is 0 or 1.
- I can use the multiplication symbol (\times) accurately.

Match the picture to the repeated addition expression.

		
$5 + 5 + 5 + 5 + 5 + 5$	$10 + 10 + 10$	$2 + 2 + 2 + 2$

Green lines connect the three packs of pencils to the expression $10 + 10 + 10$, the six dice to the expression $5 + 5 + 5 + 5 + 5 + 5$, and the four coins to the expression $2 + 2 + 2 + 2$.

Skip count to find the totals. What do you notice?

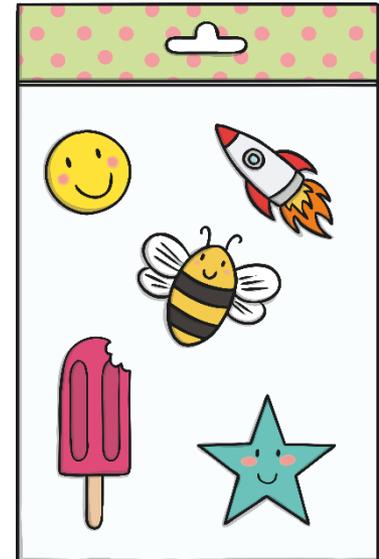
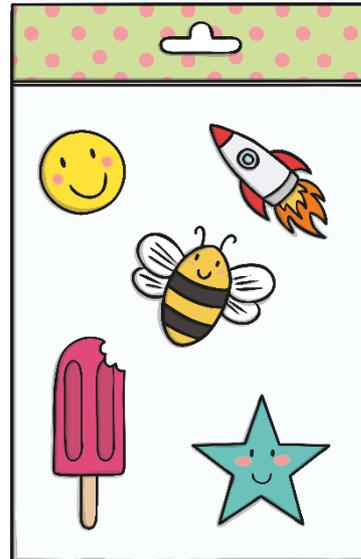
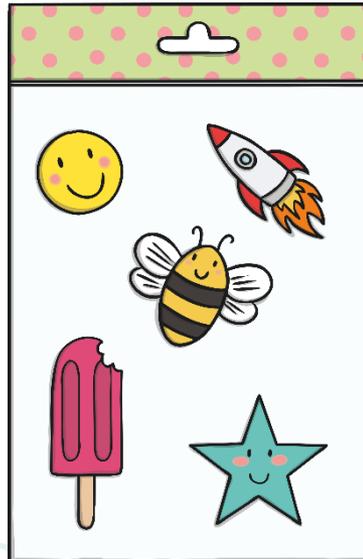
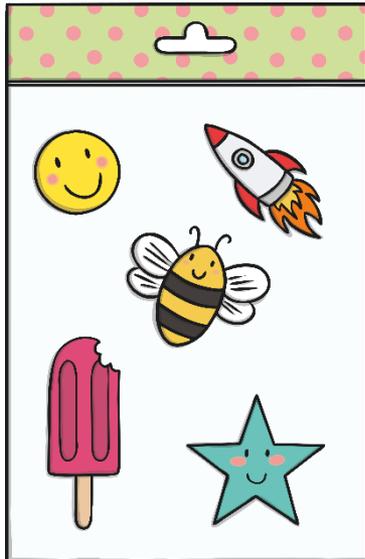
The Multiplication Symbol

The 4 represents the number of groups.

$$4 \times 5$$

The 5 represents the number of stickers in each group.

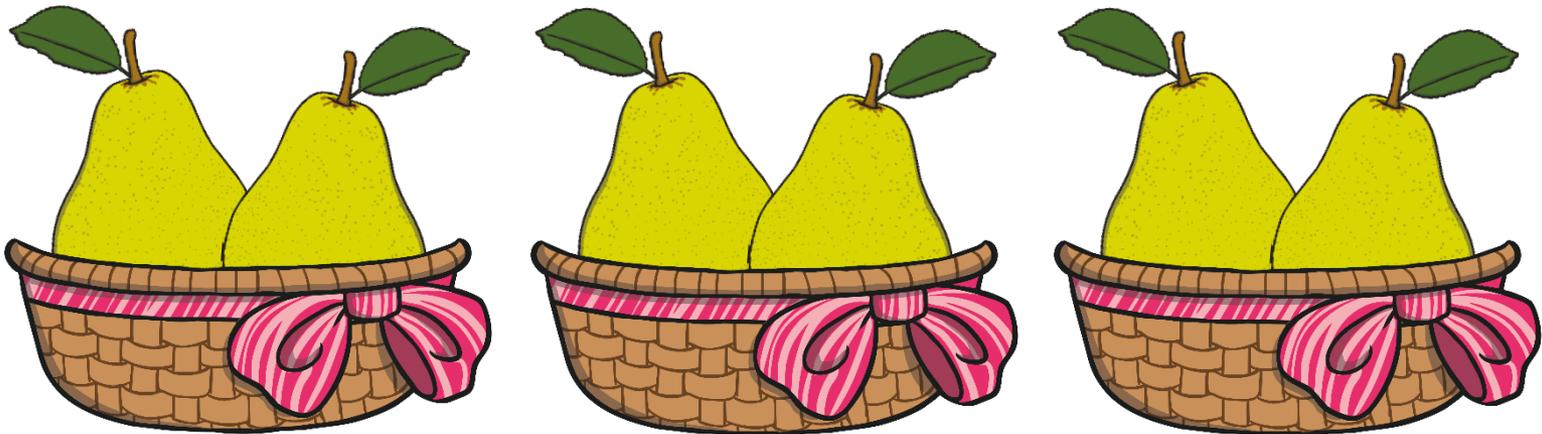
This is called a multiplication expression.



There are **4 groups of 5** stickers.

The Multiplication Symbol

Can you write this repeated addition expression as a multiplication expression. this picture?



The 3 represents the number of groups.

We can write this as:

The 2 represents the number of pears in each group.

As a bar model, it would look like this.
There are 3 groups of 2 pears.

2 There are three twos. 2
 3×2

The Multiplication Symbol

Can you write a **repeated addition expression** to match this picture?



The 2 number
represents the
number of groups.

2 times 5

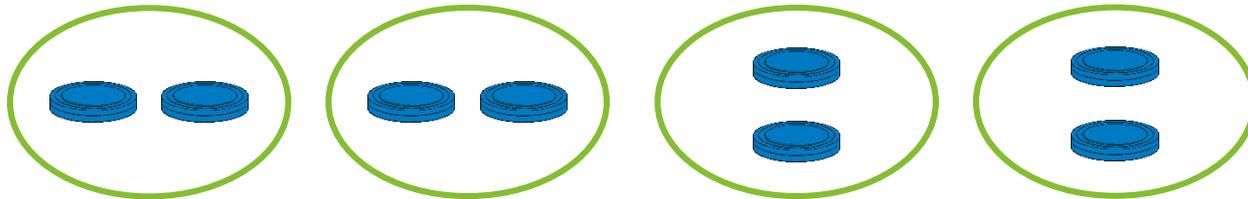
5

5

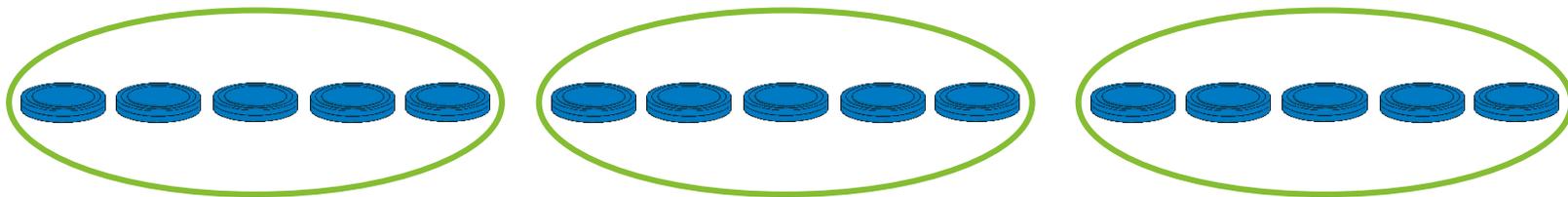
The 5 represents the
number of children in
each group.

Fran has used counters to represent this **multiplication** expression:

$$4 \times 2$$



Can you use counters to represent 3×5 ?



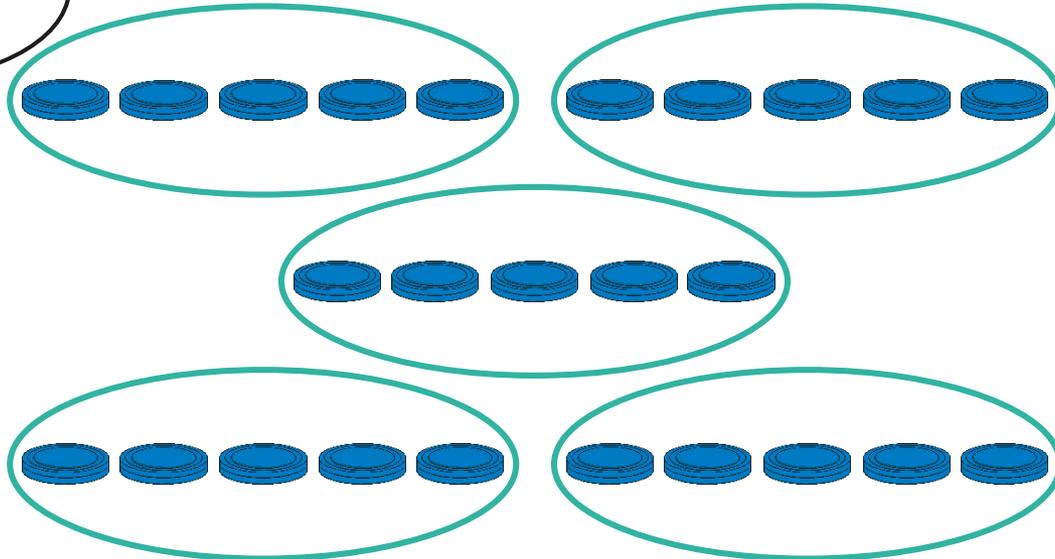
Is **3 groups of 5** the same as **three fives**? Convince me!

Representing Multiplication Expressions

Fran has done a drawing to represent this multiplication expression:

$$4 \times 5$$

Has she done it correctly? Explain how you know.

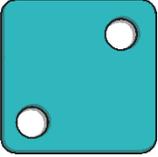
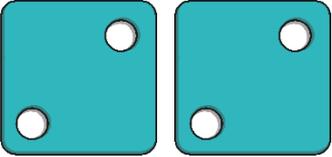
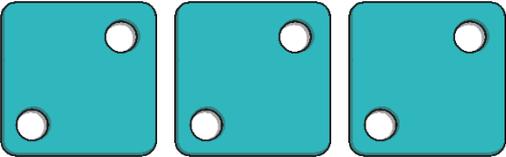
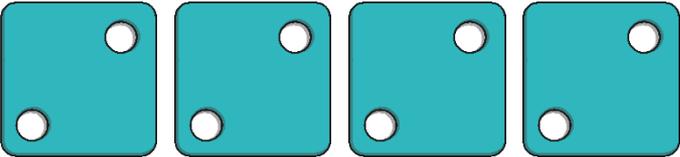
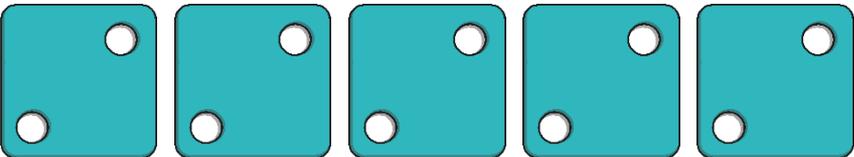


No, Fran's drawing represents 5×5 .

Do a drawing to show 4×5 .

Check that there are **4** groups with **5** counters in each group.

Can you predict what the next line will be?

	2	1×2
	$2 + 2$	2×2
	$2 + 2 + 2$	3×2
	$2 + 2 + 2 + 2$	4×2
		

What expressions are missing?

10	1×10
$10 + 10$	2×10
$10 + 10 + 10$	
	4×10
$10 + 10 + 10 + 10 + 10$	

How do you know?

Match the expressions.

Hint: you could draw a picture or use equipment to help you.

$10 + 10 + 10$		2×5
$2 + 2 + 2 + 2 + 2$		3×10
$5 + 5$		5×2

Match the phrases.

4 groups of 2		four times two
10 groups of 5		five times ten
5 groups of 10		ten times five

How many apples are in each fruit bowl?



There are **3** groups of **0** apples.

$$0 + 0 + 0$$

three zeros

0	0	0
---	---	---

three times zero

$$3 \times 0$$

If there are **0** apples in each group, there are **0** apples altogether.

How many apples are in each fruit bowl?



There are **3** groups of **1** apple.

$$1 + 1 + 1$$

three ones

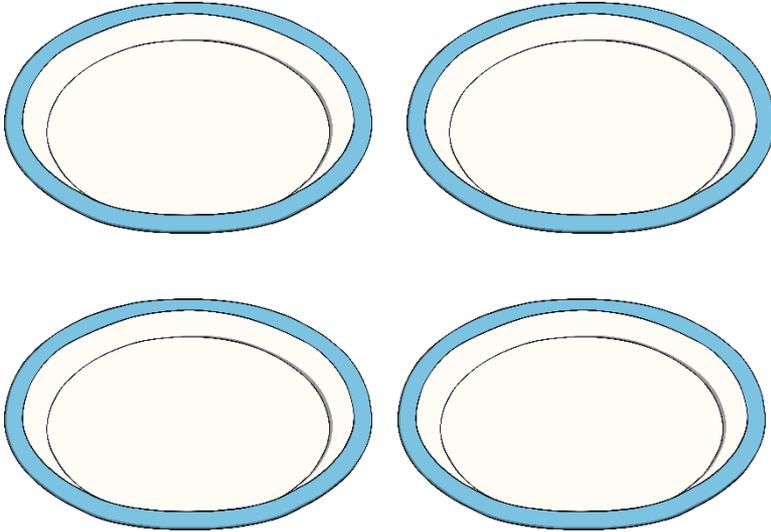
1	1	1
---	---	---

three times one

$$3 \times 1$$

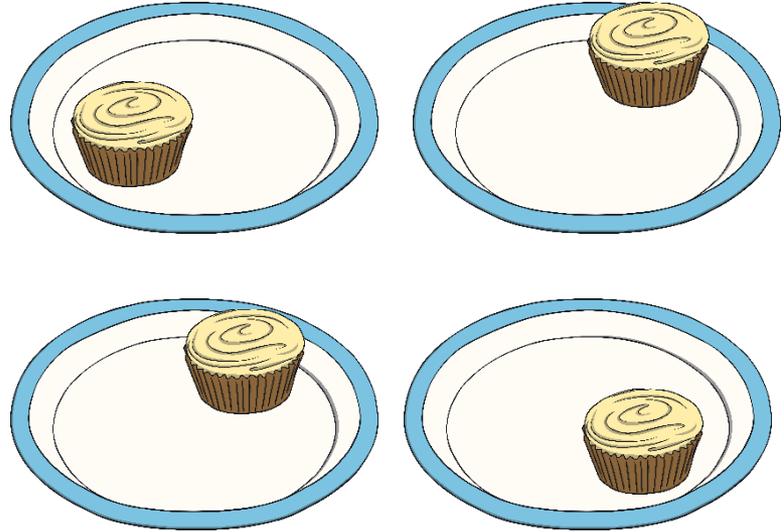
If there is **1** apple in each group, the total number of apples is equal to the number of groups.

Draw bar models and write multiplication expressions to match these pictures.



0	0	0	0
---	---	---	---

$$4 \times 0$$



1	1	1	1
---	---	---	---

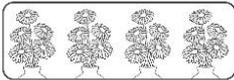
$$4 \times 1$$

Multiplication Expressions

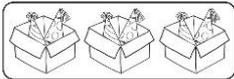
Multiplication Expressions

To write multiplication expressions using the 'x' symbol.

Draw a line to match the picture to the multiplication expression.



3×2

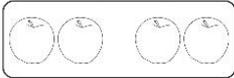
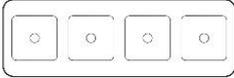
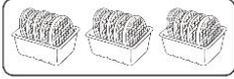


4×10



4×5

Write the multiplication expression to match these pictures.


 x

 x

 x


Maths: Multiplication and Division: Multiplication | Lesson 1 of 8: Multiplication Expressions

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Multiplication Expressions

To write multiplication expressions using the 'x' symbol.

Complete the multiplication expressions to match the picture.


 x 5

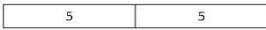
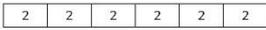
 $3 \times$

 x 10

Write the multiplication expression to match these bar models.


 x

 x

 x

 x

 x


Maths: Multiplication and Division: Multiplication | Lesson 1 of 8: Multiplication Expressions

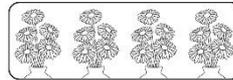
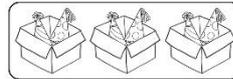
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Multiplication Expressions

To write multiplication expressions using the 'x' symbol.

Write the multiplication expressions to match these pictures.

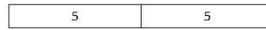
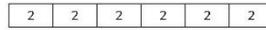

 x

 x

 x

Write the multiplication expression to match these bar models.


 x

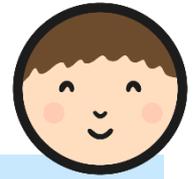
 x

 x

 x

 x


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Dive in by completing your own activity!



Multiplication Expressions

Complete these sentences.



There are ____ groups of ____ pencils.

There are _____ tens.

____ × ____



There are ____ groups of ____ biscuits.

There are _____ fives.

____ × ____



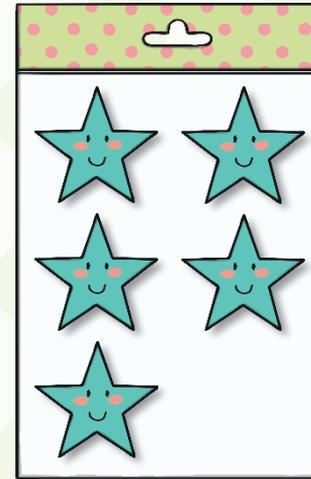
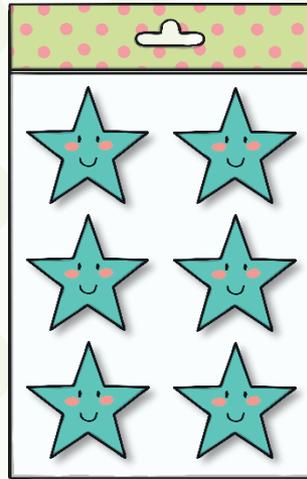
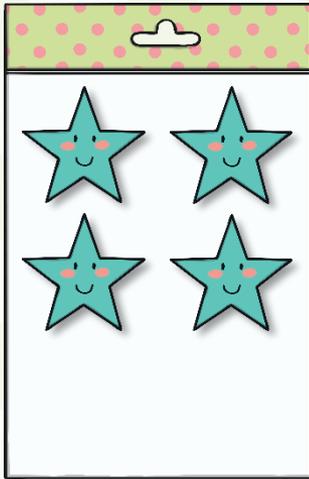
There are ____ groups of ____ banana.

There are _____ ones.

____ × ____

Multiplication Puzzle

I can't write
a multiplication expression
to match this picture.



Do you agree? Why?

What would you need to do before writing a
multiplication expression to match this picture?

$$\square \times \square$$

Multiplication Puzzle

Can you complete the repeated addition and multiplication expressions?

$$5 + 5 + 5 + 5 = \square \times \square$$

$$\square + \square + \square + \square + \square + \square = 6 \times 2$$

$$3 + 3 + 3 + 3 + 3 = \square \times \square$$

Aim



- To write multiplication expressions using the 'x' symbol.

Success Criteria

- I can write a repeated addition expression as a multiplication expression.
- I can write multiplication expressions when the group size is 0 or 1.
- I can use the multiplication symbol (\times) accurately.

