Multiplication as "Equal Groups of" Guided Notes   Math 3

What is the equal groups strategy?

The equal groups strategy is one way to multiply factors visually. Factors are what we call to the numbers that we multiply. Multiplication using the equal groups strategy means having to place **a certain number of objects into a certain number of groups**. The factors are the numbers that determine **how many groups to make** and **how many items to put in each group.**

That means that **the amount of items inside one group is always equal to the amount of items inside other groups.** The total number of items in all the groups is what we call the product, which is the answer to a multiplication problem.

We can read a multiplication equation **A x B** as having **A equal groups of B**.

For example, **4 x 3** can be read as having **4 equal groups of 3**. Thus, we will draw 4 containers that will have 3 items inside each of the containers.
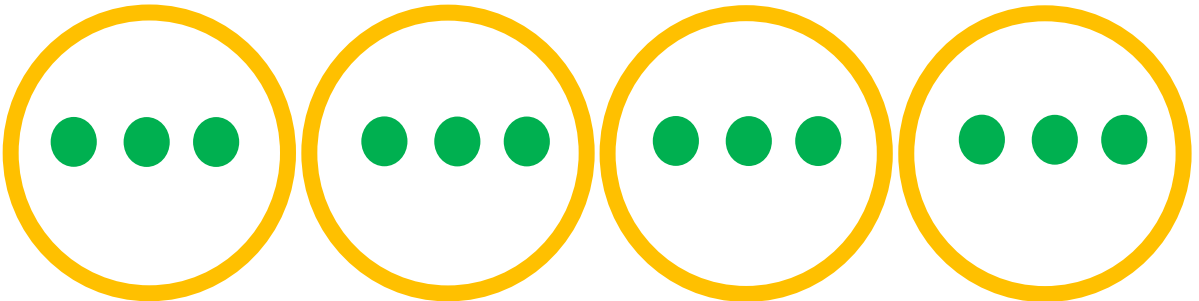Then, we can count how many items there are altogether to determine the product.

Multiplication as "Equal Groups of" Guided Notes   **Math 3**

For example:

<div align="center">

4 x 3

**Number of groups   Number of items
to make   in each group**

4 equal groups of 3

</div>

First, draw 4 circles:
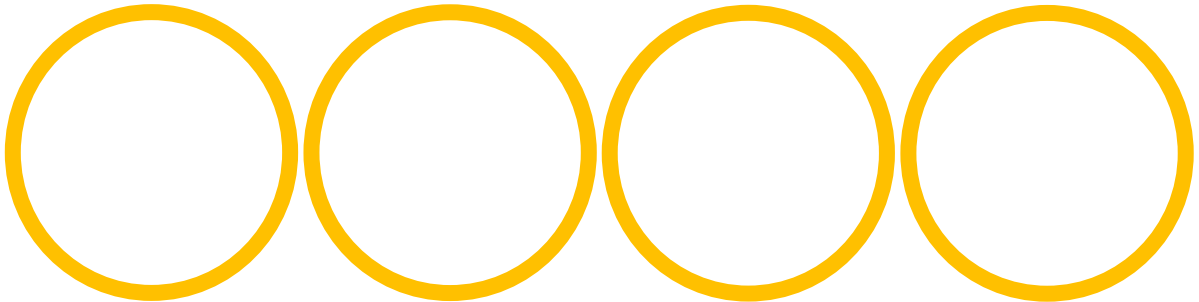
Then, draw 3 dots in each circle:
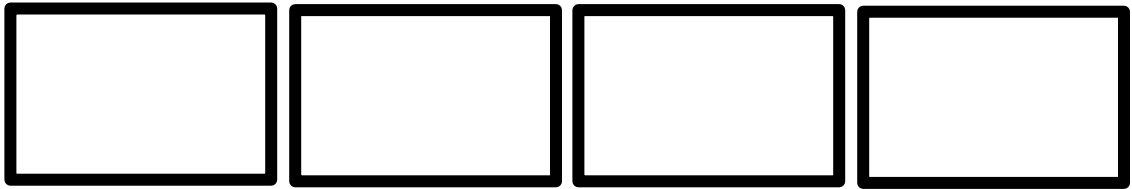
Count all the dots placed in all the groups:

<div align="center">

There are **12** dots in all the groups.

So, the product is **12**.

</div>

2

Multiplication as "Equal Groups of" Guided Notes   Math 3

Draw 4 dots in each group.

What is the product?

Now draw 5 dots in each group.
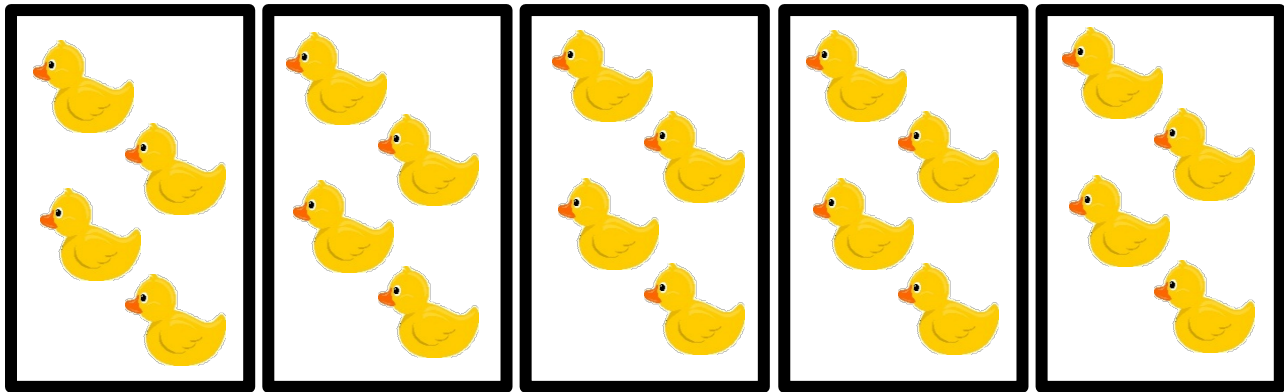

What is the product?

Time to Think

1. How would you read 5 x 7 as equal groups of?

2. In the expression 6 x 7, how many groups will you make and how many items will be in each group?

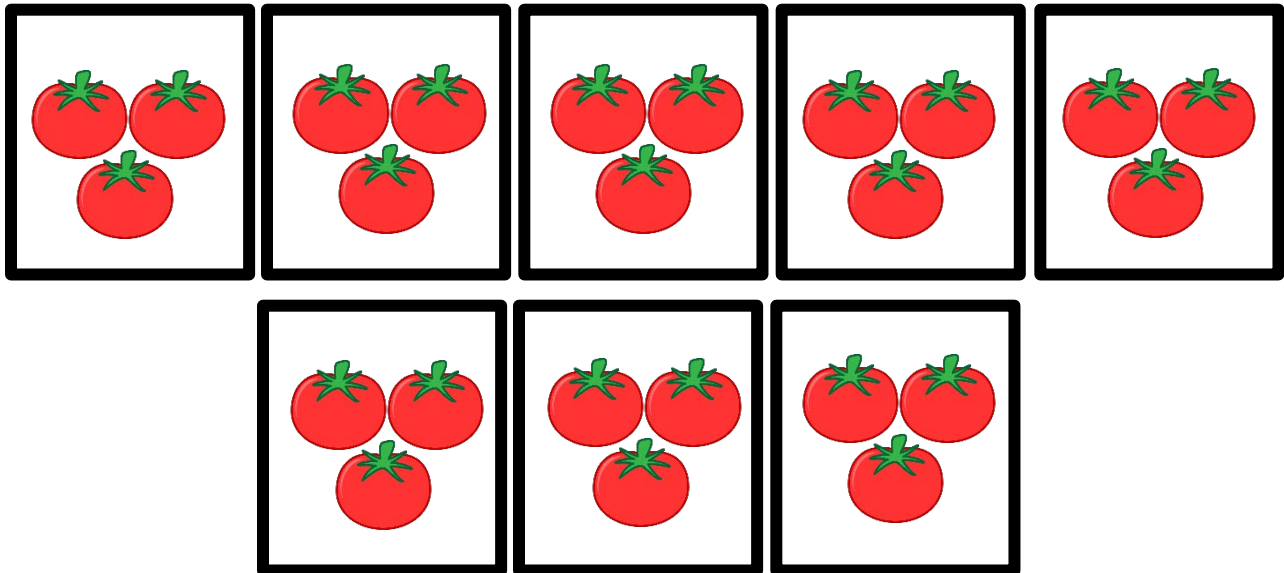# Multiplication as "Equal Groups of" Guided Notes   **Math 3**

There are _____ groups of _____ ducks.

What would be the expression for the groups of ducks?

_____ x _____

There are _____ groups of _____ tomatoes.

What would be the expression for the groups of tomatoes?

_____ x _____

Multiplication as "Equal Groups of" Guided Notes   **Math 3**

How would you draw 7 x 4?

There are _____ groups of _____.
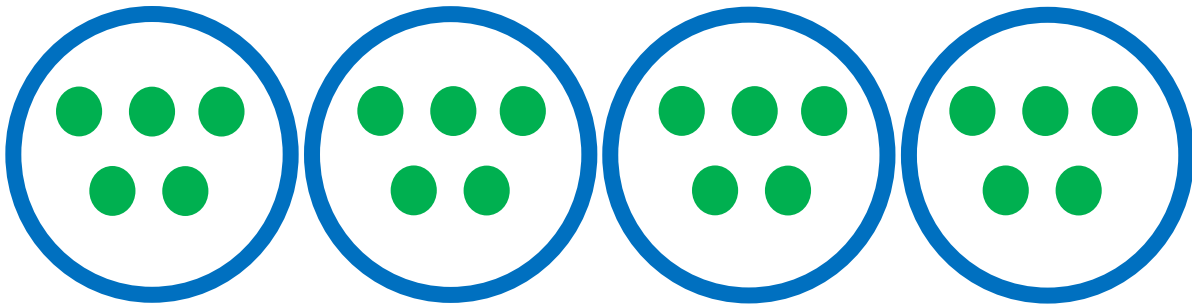The product is _____.

How would you draw 6 x 2?

There are _____ groups of _____.
The product is _____.

     5

Multiplication as "Equal Groups of" Guided Notes   **Math 3**

How many dots are in each group?

_____   _____   _____   _____

How many groups are there?

Time to Think

How many times is the number repeated? What kind of addition will happen if we add all these numbers? Write a sentence.

What is the answer using addition and the answer using multiplication as equal groups of? What do you notice about the answers?

The number of _____ determine how many times the number of _____ will be added repeatedly.

Multiplication as "Equal Groups of" Guided Notes   **Math 3**

Katy has 3 paper bags. She put 8 jelly beans in each bag. How many jelly beans does she have?

Draw _____ bags of _____ jelly beans.

Katy has _____ jelly beans.

Troy has 4 cups. He put 2 pebbles in each cup. How many pebbles did he put in all cups?

Draw _____ cups of _____ pebbles.

Troy put _____ pebbles in all cups.

Multiplication as "Equal Groups of" Guided Notes   Math 3

Time to Think

Using what we learned about the equal groups strategy, answer these word problems:

1. Harry has 6 bags that have 4 carrots each. How many carrots does he have?

2. Steff wants to put 5 rings each in 7 containers. How many rings are there altogether?