

ACTIVITY + PARENT GUIDE

Equal Groups

The bridge from counting to multiplication.

Before a child is asked to remember 4×3 , the child should be able to see four equal groups of three.

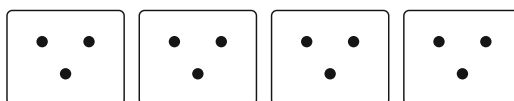
Equal groups help children coordinate three quantities at once:

- the **number of groups**,
- the **number in each group**, and
- the **total**.

APPROACHING MULTIPLICATION

YOU NEED

12–20 small objects such as coins, beans, buttons, cubes, or cereal pieces; a pencil; and a few quiet minutes.



4 groups of 3 $3 + 3 + 3 + 3 = 12$ $4 \times 3 = 12$

WHY THIS MATTERS

Multiplication is not just a string of facts. It describes a relationship between equal groups. When children can move among objects, drawings, words, repeated addition, and an equation, the symbols have something meaningful to stand for.

THE PARENT QUESTION TO KEEP ASKING

“How many groups? How many in each group? How many altogether?”

MULTIPLICATION FLIP

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1. Build the groups

Start with objects before asking for symbols.

PARENT SCRIPT

Put the objects in front of your child. Say:

“Make the groups. Keep the same number in every group.”

After each build, ask:

1. How many groups did you make?
2. How many are in each group?
3. How many are there altogether?

PARENT NOTE

Do not introduce the multiplication equation first. Let the physical structure come first. The equation should describe something the child can already see.

BUILD 3 GROUPS OF 4

Number of groups: _____

In each group: _____

Total: _____

BUILD 5 GROUPS OF 2

Number of groups: _____

In each group: _____

Total: _____

BUILD 2 GROUPS OF 6

Number of groups: _____

In each group: _____

Total: _____

TRY THIS

After your child builds a set correctly, move the objects around *inside* each group without changing how many are there. Ask, “Did the number change? How do you know?”

2. Equal or not equal?

Multiplication starts with the word equal.

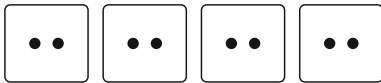
A collection is ready to represent multiplication when every group has the same number of objects. Ask your child to decide whether each picture shows **equal groups**.

PARENT NOTE

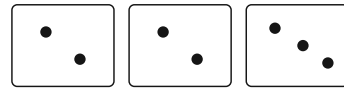
A child may count the total correctly and still miss the structure. Keep asking about the groups, not only “How many altogether?”



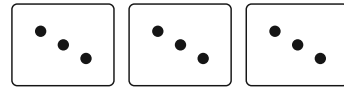
☐ Equal ☐ Not equal



☐ Equal ☐ Not equal



☐ Equal ☐ Not equal



☐ Equal ☐ Not equal

FIX THE UNEQUAL PICTURE

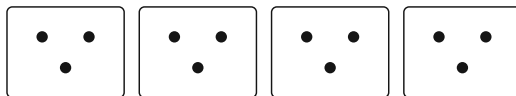
Choose one picture that is not equal. Draw or describe one change that would make every group equal.

WHY THIS MATTERS

The word **equal** is doing important work. Three groups containing 2, 2, and 4 objects may have a total of 8, but they do not represent “3 groups of the same amount.” The equal-group structure is what multiplication captures.

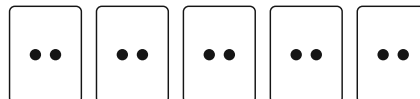
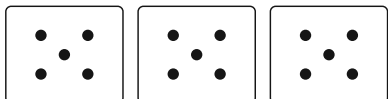
3. One structure, many representations

Connect the picture to the language and symbols.



Words	four groups of three
Repeated addition	$3 + 3 + 3 + 3 = 12$
Multiplication	$4 \times 3 = 12$
Meaning	4 tells how many groups; 3 tells how many are in each group.

NOW CONNECT THESE TWO



Words: _____

Repeated addition: _____

Multiplication: _____

Words: _____

Repeated addition: _____

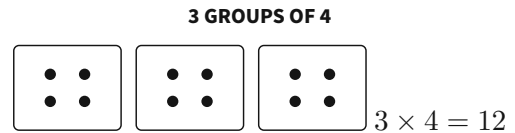
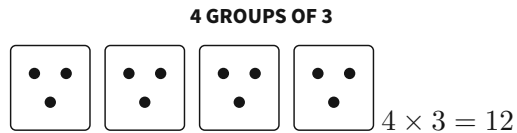
Multiplication: _____

PARENT NOTE

Repeated addition is a useful bridge, but it is not the destination. Here it helps connect equal groups to multiplication notation. Later, arrays, area, comparison, scaling, and properties will extend the idea.

4. Same total, different grouping

Notice what changes and what stays the same.



The total is the same. The story of the groups is different.

	4 groups of 3	3 groups of 4
How many groups?	_____	_____
How many in each group?	_____	_____
How many altogether?	_____	_____

TALK ABOUT IT

Why do both pictures have 12 objects even though the groups are arranged differently?

TRY THIS

If you have linking cubes, build 4 trains of 3 cubes and then 3 trains of 4 cubes. Put the two collections side by side. Ask, “What changed? What did not change?”

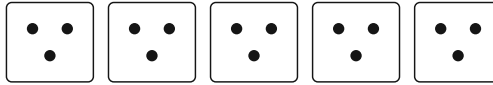
PARENT NOTE

This is an early doorway to $4 \times 3 = 3 \times 4$. The child does not need the word *commutative* yet. The important idea is that rearranging the same total can reveal a related multiplication fact.

5. Is the equal-groups idea taking hold?

A short readiness check before moving on.

A. READ THE PICTURE



Number of groups: _____

In each group: _____

Total: _____

B. BUILD OR DRAW

Draw **4 groups of 5**. Then write the repeated addition and multiplication equation.



Repeated addition: _____

Multiplication: _____

C. EXPLAIN THE DIFFERENCE

How is **4 groups of 2** different from $4 + 2$?

WHY THIS MATTERS

A strong readiness signal is not speed. It is the ability to coordinate the groups, the group size, and the total, and to represent the same structure in more than one way.

READY FOR THE NEXT STEP?

If this feels comfortable, move next to **arrays**. Arrays organize equal groups into rows and columns and make multiplication relationships even easier to see.

If this still feels confusing, stay with objects and drawings for a few more short sessions. Meaning comes before memorization.

A NATURAL NEXT STEP

Take the **Multiplication Readiness Check** at MultiplicationFlip.com/readiness to see how equal groups fit with number sense, place value, addition, subtraction, and patterns.

See the groups. Name the relationship. Then let the symbols follow.