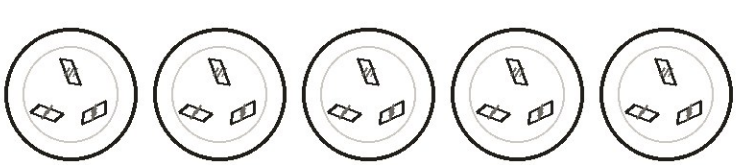
"6 times 4"? Helping your child see equal groups

Parent page · ages 7–8 · goes with the video "Understand the concept"

An understandable answer

Does your child say 10 to "6 times 4"? They know addition well: 6 plus 4 is 10. It isn't necessarily carelessness: "times" may still be new, and the two numbers don't count the same thing.

The key idea



5 plates: 5 groups

3 pieces of pasta on each plate

5 times 3 pieces: 15 pieces in all

With equal groups, one number counts the groups (6 plates), the other counts what is in each group (4 pieces of pasta). "6 times 4 pieces of pasta" means 4 pieces taken 6 times: 4 + 4 + 4 + 4 + 4 + 4 = 24. We can also count by fours.

Always true, two traps, one convention

With "times," swapping the two numbers doesn't change the total (6 times 4 and 4 times 6 are both 24), but the groups change (6 plates of 4, or 4 plates of 6). Traps: adding the two numbers (6 + 4 mixes plates and pasta); using "times" for unequal groups (a plate with 2 pieces among plates with 3 is no longer "times"). Convention: "6 times 4" means 6 groups of 4, the number of groups first.

Questions instead of corrections

- "How many groups?"
- "How many in each group?"
- "What does each number count?"

To test "times": "Does every group have the same number?" Then: "Tell me how you know."

The activities

Six paper plates (or bowls), about thirty pieces of pasta, a sheet of paper, a pencil, and scissors for the adult (cut-out). Keep the pasta out of reach of toddlers. Give your child only page 2: keep this parent page out of sight while they work.

A few days later, without warning (cut out)

4 vases **5 flowers in each vase**

How many flowers in all? How do you know?

In all: _____

Read after your child has worked it out

- 5 plates of 3 pieces: 5 times 3 pieces. 3 + 3 + 3 + 3 + 3 = 15; counting by threes: 3, 6, 9, 12, 15. One more plate: 6 times 3 pieces = 18, which is 3 more.
- One piece taken off: 3, 3, 3, 3, 2 (14 pieces): it's no longer "5 times 3," the groups are unequal.
- 3 plates of 5 pieces: 3 times 5 pieces. The 3 counts the plates, the 5 counts the pieces on each plate. The total is still 15 (it's the same pasta), but the groups aren't the same.
- Challenge: for example 4 chairs with 4 legs each: 4 times 4 legs (16); a stool with 3 legs among them: no longer "times."
- Cut-out: 4 vases of 5 flowers: 4 times 5 flowers = 20 (5 + 5 + 5 + 5, or 5, 10, 15, 20).

A good sign: they talk about groups and what is in each one. If not, do the plates again with other numbers: it often takes several tries.

"Times": how many in all?



6 islands and 4 packages: 6 plus 4 is 10!

The slip says: 6 islands, and 4 packages for each island. Do you agree with Mina?

1. I predict

5 plates, with 3 pieces of pasta on each.
How many pieces in all, I think? .....
Is it 5 plus 3?
☐ yes ☐ no
Why? _____

2. I set out and count

a. Set out 5 plates (or draw 5 circles on the page).
b. Put 3 pieces of pasta on each plate (or draw 3 dots in each circle).
c. Count the pieces one by one: ..... .
d. Count by threes: 3, ..., ..., ..., ...
e. Write the addition: 3 + 3 + 3 + 3 + 3 = ...

3. I check

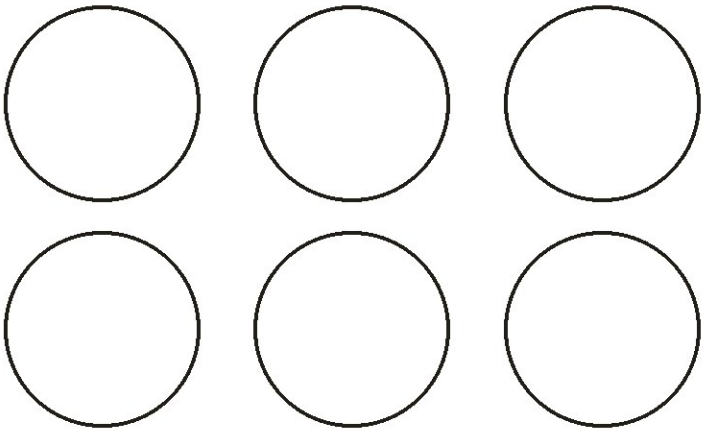
There are ..... pieces in all.
5 times 3 pieces is ..... pieces.
My prediction: ☐ was right ☐ needs changing

Changed your prediction? Great: you checked it yourself.

4. What if we add a plate?

Add a plate of 3 pieces. How many more pieces? ..... How many in all? ..... Write: ..... times 3 pieces.

My plates



One circle = one plate. One dot = one piece of pasta.

5. What if one plate isn't the same?

Take away the plate you added: you have 5 plates of 3 again. Take one piece off a plate. Is it still 5 times 3 pieces?
☐ yes ☐ no
Why? _____

6. What about 3 plates of 5 pieces?

Put the piece back. With those 15 pieces, make 3 plates of 5 (or draw 3 circles with 5 dots). What does the 3 count? ..... What does the 5 count? ..... We say: ..... times ..... pieces.

7. I explain

A friend says: "6 times 4 is 10, because 6 plus 4 makes 10." Is the friend right? Explain why to an adult.

_____

_____

8. Family challenge

Look for equal groups around the house: 4 legs on each chair, 2 wheels on each bike... Write down one you find.
I found: ..... times .....