Names (pair) _____ Date _____

What Multiplication Means

Example

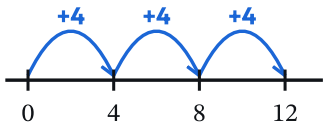
We can picture the product 3×4 in several ways, and it is always $4 + 4 + 4 = 12$.



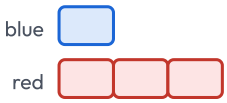
3 plates of 4 apples



3 rows of 4 dots



3 jumps of 4



red is 3 times as long

1 IN PAIRS For each picture, write an addition and a multiplication.

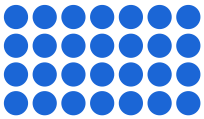
a)



addition: ☐

multiplication: ☐

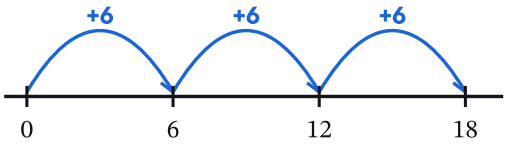
b)



addition: ☐

multiplication: ☐

c)



addition: ☐

multiplication: ☐

d)



addition: ☐

multiplication: ☐

2 IN PAIRS The menu has 4 sandwiches (A, B, C, D) and 3 juices (1, 2, 3). How many different "sandwich and juice" meals can you make? Complete the table, then write a multiplication.

	A	B	C	D
1	A1	B1		
2				
3				

☐ × ☐ = ☐

Names (pair) _____ Date _____

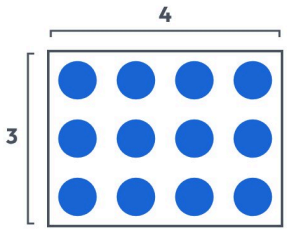
Remember

In the product $3 \times 4 = 12$ the numbers 3 and 4 are **factors** and 12 is the **product**. Factors can **swap places**: $3 \times 4 = 4 \times 3$, because it is the same rectangle, just turned. Multiplying by 1 does not change a number ($7 \times 1 = 7$), and multiplying by 0 gives 0 ($7 \times 0 = 0$).

3 IN PAIRS The pictures are from the Multiplication Rectangle app, before and after the **Turn** button. What changed and what did not? Write an equation.

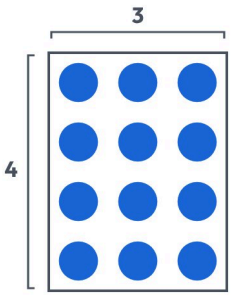
3 × 4 = 12

3 rows of 4 dots.



4 × 3 = 12

4 rows of 3 dots.



☐ × ☐ = ☐ × ☐

4 IN PAIRS Mia says: "Multiplying always makes a number bigger." Work these out, then decide whether Mia is right.

$6 \times 3 =$ ☐ $6 \times 1 =$ ☐ $6 \times 0 =$ ☐

$1 \times 1 =$ ☐ $0 \times 9 =$ ☐ $2 \times 2 =$ ☐

Is Mia right? **yes** / **no** Why?

_____

5 IN A GROUP Write two stories for 6×4: one about equal groups, and one where something is "4 times as many".

_____

_____

The Multiplication Rectangle app · otooly.com/multiplication-rectangle

The **Dots** view: make 3 rows of 4 dots and press **Turn**. Then make 1 row of 9 dots. What is 1×9?

★ ON YOUR OWN **Exit card.** 5 groups of 6: ☐ = ☐ $9 \times 0 =$ ☐

$1 \times 37 =$ ☐