Explore together

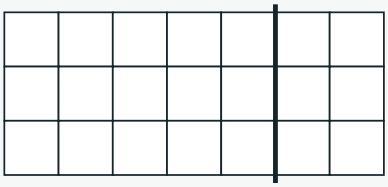
Split an Array to Multiply

Split an array into two rectangles and show that the total stays the same.

Get ready: Identical blocks or grid paper and a pencil.

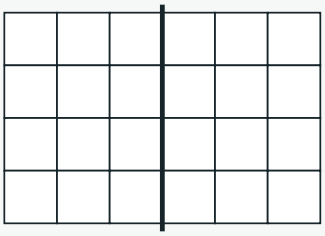
01 Split each row into 5 and 2

Start with 3 rows of 7. Split each row into 5 and 2.
The left part has 3 × 5 = 15. The right part has 3 × 2 = 6.
Both parts together have 15 + 6 = 21 squares.



02 Try two equal parts

Start with 4 rows of 6. Split each row into 3 and 3.
Both parts have 4 rows of 3, so 12 + 12 = 24.



Ask as you play

“Can you show me how you know?” Let your child point, build, draw or tell.

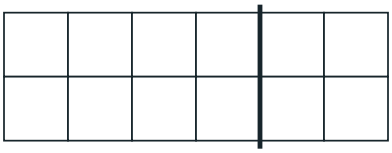
Try it yourself

Split an Array to Multiply

Point, build, draw or tell. A grown-up can read each question.

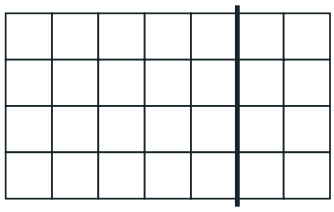
1

Split each of the 2 rows into 4 squares and 2 squares. How many squares are in each part and in all?



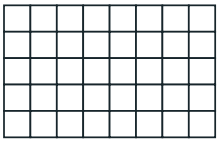
2

There are 4 rows of 7. Each row is split into 5 and 2. Fill in the blank: 4 × 5 + 4 × 2 = ___.



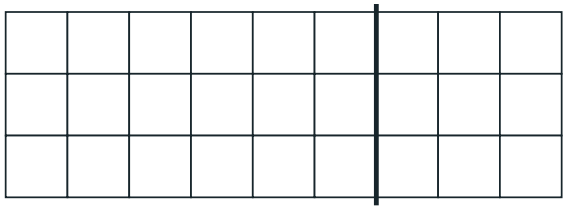
3

Draw a line between two columns to make two rectangles. How many squares are there in all?



4

Split 3 rows of 9 into 6 and 3 per row. Someone wrote 3 × 6 + 3 = 21. What did they miss?



5 • Try it if you want

There are 6 rows of 12. Split each row into 10 and 2. How many squares are there in all?

Parent answer key

Split an Array to Multiply

Keep this page with the grown-up.

1 8 on the left, 4 on the right, 12 in all. Both parts have 2 rows.

2 28. The two parts have 20 and 8 squares.

3 40. Any straight split between columns works. For example, 5 × 3 + 5 × 5 = 15 + 25.

4 The right part has 3 rows of 3. It has 9 squares, so the total is 18 + 9 = 27.

5 72. Six rows of 10 make 60, and six rows of 2 make 12. Add 60 + 12.

What did you notice?

Tried alone, tried with help, or skipped? Pointing, building and explaining all count.

Next time

Start with 2 rows of 4 if the picture feels busy. If the idea is clear, ask for two ways to split the same array.