LESSON MAKER PRO

Split and Count

Find area by multiplying smaller parts.

GRADE 3 · 3.M.B.22

3.M.B.22 "Relate area to the operations of multiplication using real-world problems, concrete materials, mathematical reasoning, and the distributive property."

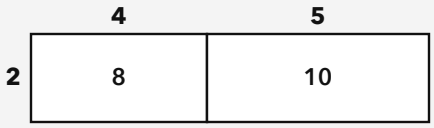
NAME _____ DATE _____

THE BIG IDEA

To find the area of a rectangle made of unit squares, multiply the number of rows by the number of columns. You can split the columns into groups, find the area of each part, and add the parts.

WORKED EXAMPLE

Find the area of the rectangle in square units. Use the split shown.

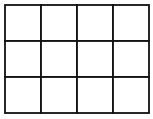


1. Find the first part: 2 x 4 = 8.
2. Find the second part: 2 x 5 = 10.
3. Add the parts: 8 + 10 = 18.

Answer: 18 square units

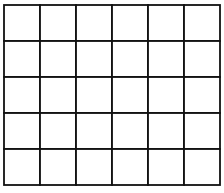
PRACTICE 6 problems

1 Find the area in square units.



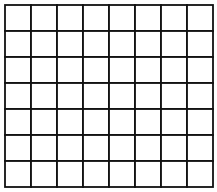
ANSWER _____

2 How many unit squares are in this rectangle?



ANSWER _____

3 Find the area in square units.



ANSWER _____

4 Find the area. Write an addition equation using the parts.

	3	4
4	12	16

ANSWER _____

_____

5 Find the area. Write an addition equation using the parts.

	5	3
6	30	18

ANSWER _____

_____

6 Find the area. Write an addition equation using the parts.

	4	3
10	40	30

ANSWER _____

_____

APPLY IT Show your work

1 A picnic blanket is made of square patches arranged as shown. How many patches are on the blanket? Write an addition equation to show how you found the total.

	5	4
8	40	32

ANSWER _____

2 The class garden has square planting spaces arranged as shown. How many spaces are there? Write an addition equation to show your method.

	7	3
6	42	18

ANSWER _____

CHALLENGE One step up

Kai says the two parts of this game board have more squares together than the whole board. Is Kai right? Explain with equations.

	4	6
8	32	48

WORK SPACE AND ANSWER

ANSWER KEY # Split and Count

GRADE 3 · 3.M.B.22

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Find the area in square units.	**12 square units**
2	How many unit squares are in this rectangle?	**30 unit squares**
3	Find the area in square units.	**56 square units**
4	Find the area. Write an addition equation using the parts.	**4 x 3 + 4 x 4 = 12 + 16 = 28 square units**
5	Find the area. Write an addition equation using the parts.	**6 x 5 + 6 x 3 = 30 + 18 = 48 square units**
6	Find the area. Write an addition equation using the parts.	**10 x 4 + 10 x 3 = 40 + 30 = 70 square units**

PART 2 · APPLY IT

1. **8 x 5 + 8 x 4 = 40 + 32 = 72 patches** Multiply the rows by the columns in each part, then add the two totals.
2. **6 x 7 + 6 x 3 = 42 + 18 = 60 planting spaces** Find the spaces in each part of the garden, then add 42 and 18.

CHALLENGE

No. The parts have 8 x 4 + 8 x 6 = 32 + 48 = 80 squares. The whole board has 8 x 10 = 80 squares.

Accept equivalent multiplication and addition equations that match each model. Area answers should use square units when no real-world object is named.