

Area of rectangles by counting rows and columns

WHAT THIS LESSON TEACHES

Area is how much flat space a rectangle covers. Find it by counting how many equal squares sit in one row, then adding that total once for every row.

→ A 4-by-3 rectangle covers 12 squares, so its area is 12 squares.

→ In a 5-by-2 rectangle there are 5 squares in each row and 2 rows, so $5 + 5 = 10$.

MODEL THIS ON THE BOARD

AREA OF A 3-BY-4 SCHOOL-YARD RECTANGLE

- ① Look at the rectangle drawn in squares. Count **4** squares along one row.
- ② Count the rows: there are **3** rows the same size.
- ③ Add the row total for each row: $4 + 4 + 4$.
- ④ The sum is 12, so the area is 12 squares.

DISCUSSION STARTER

REFLECT Was counting by rows faster than one square at a time? When does each help?

ANSWER KEY

a) 12

b) 10

c) 12 squares

Q1: 6 squares

Q2: 8 squares

Q3: 20 squares

a) **Always** — That repeated addition is exactly how we find the total squares inside.

b) **Always** — 3 rows of 4 is $4 + 4 + 4$ which equals 12.

c) **Never** — Adding the row total once per row is a faster way that gives the same answer.

d) **Always** — Both contain 10 unit squares, just turned the other way.