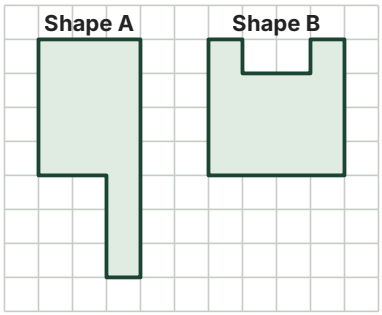
Exploring Area

Geometry & Shapes • Answer Key

ANSWER KEY • Amplify Alignment: Grade 6 Accelerated, Unit 1, Lesson 1

1. Which shape has a greater area? Show or explain your thinking.

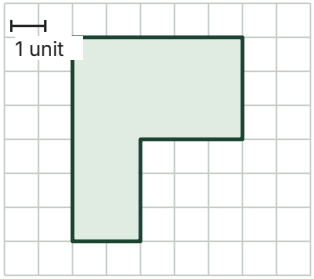
- **A** Shape A
- **B** Shape B
- **C** They have the same area.



Shape A has 15 square units. Shape B has 14 square units (a 4 × 4 square with 2 squares missing).

Problems 2–4: Here is a new shape. Each square on the grid has an area of 1 square unit.

2. Determine the area of the shape. Show or explain your thinking.



21 square units. Sample: the top rectangle is 5 × 3 = 15 and the bottom part is 2 × 3 = 6. 15 + 6 = 21.

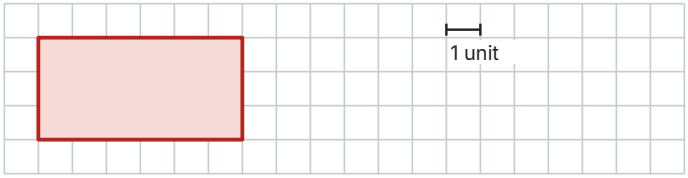
3. Show or describe another way to determine the area of this shape.

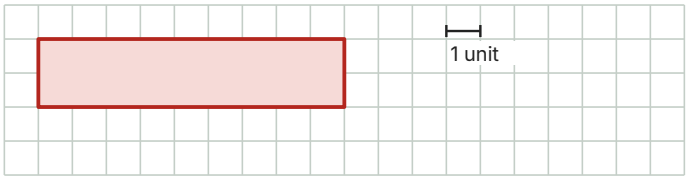
Sample: Draw a 5 × 6 rectangle around the shape (30 square units) and subtract the missing 3 × 3 corner (9 square units). 30 − 9 = 21.

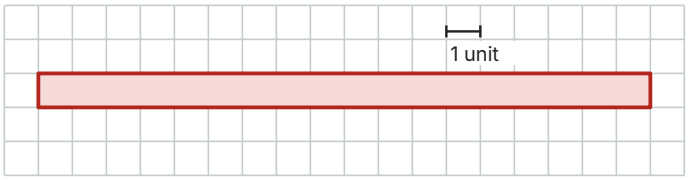
4. Show or describe how you would change this shape so it has an area of 18 square units.

Sample: Remove 3 squares, such as the column of 3 squares on the right side of the top rectangle. The top would be 4 × 3 = 12, and 12 + 6 = 18.

5. Draw *three* different rectangles, each with an area of 18 square units. Each square in the grid has an area of 1 square unit.







Sample answers: 6 × 3, 9 × 2, and 18 × 1. Other shapes with 18 squares are also correct.

6. Leah says that two shapes with different outlines can never have the same area. Do you agree? Explain your thinking.

No. Area only measures how many square units cover a shape. For example, a 2 × 6 rectangle and a 3 × 4 rectangle look different, but both have an area of 12 square units.