

Name \_\_\_\_\_

## Area and Mixed Numbers

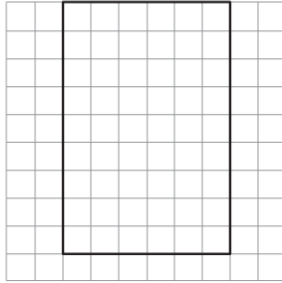
**COMMON CORE STANDARD** CC.5.NF.4b

Apply and extend previous understandings of multiplication and division to multiply and divide fractions.

Use the grid to find the area.

1. Let each square represent  $\frac{1}{4}$  unit by  $\frac{1}{4}$  unit.

$$2\frac{1}{4} \times 1\frac{1}{2} = 3\frac{3}{8}$$



54 squares cover the diagram.

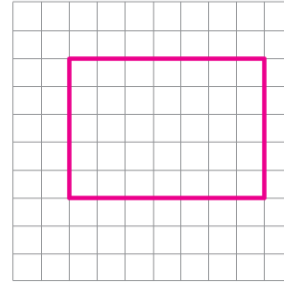
Each square is  $\frac{1}{16}$  square unit.

The area of the diagram is

$$54 \times \frac{1}{16} = \frac{54}{16} = 3\frac{3}{8} \text{ square units.}$$

2. Let each square represent  $\frac{1}{3}$  unit by  $\frac{1}{3}$  unit.

$$1\frac{2}{3} \times 2\frac{1}{3} = 3\frac{8}{9}$$



The area is  $3\frac{8}{9}$  square units.

Use an area model to solve.

3.  $1\frac{1}{8} \times 2\frac{1}{2}$

4.  $2\frac{2}{3} \times 1\frac{1}{3}$

5.  $1\frac{3}{4} \times 2\frac{1}{2}$

$$2\frac{13}{16}$$

$$3\frac{5}{9}$$

$$4\frac{3}{8}$$

### Problem Solving



6. Ava's bedroom rug is  $2\frac{3}{4}$  feet long and  $2\frac{1}{2}$  feet wide. What is the area of the rug?

$$6\frac{7}{8} \text{ square feet}$$

7. A painting is  $2\frac{2}{3}$  feet long and  $1\frac{1}{2}$  feet high. What is the area of the painting?

$$4 \text{ square feet}$$

### Lesson Check (CC.5.NF.4b)

- The base of a fountain is rectangular. Its dimensions are  $1\frac{2}{3}$  feet by  $2\frac{2}{3}$  feet. What is the area of the base of the fountain?
  - (A)  $2\frac{4}{9}$  square feet
  - (B)  $3\frac{4}{9}$  square feet
  - (C)  $4\frac{1}{3}$  square feet
  - (D)  $4\frac{4}{9}$  square feet
- Bill's living room floor is covered with carpet tiles. Each tile is  $1\frac{1}{2}$  feet long by  $2\frac{3}{5}$  feet wide. What is the area of one tile?
  - (A)  $2\frac{3}{10}$  square feet
  - (B)  $2\frac{9}{10}$  square feet
  - (C)  $3\frac{9}{10}$  square feet
  - (D)  $4\frac{1}{10}$  square feet

### Spiral Review (CC.5.OA.2, CC.5.NBT.5, CC.5.NBT.6, CC.5.NF.4a)

- Lucy earned \$18 babysitting on Friday and \$20 babysitting on Saturday. On Sunday, she spent half of the money. Which expression matches the words? (Lesson 1.10)
  - (A)  $18 + 20 \div 2$
  - (B)  $(18 + 20) \div 2$
  - (C)  $2 \times (18 + 20)$
  - (D)  $2 \times 18 + 20$
- A grocery store clerk is putting cans of soup on the shelves. She has 12 boxes, which each contain 24 cans of soup. Altogether, how many cans of soup will the clerk put on the shelves? (Lesson 1.7)
  - (A) 36
  - (B) 208
  - (C) 248
  - (D) 288
- Which is the best estimate for the quotient  $5,397 \div 62$ ? (Lesson 2.5)
  - (A) 80
  - (B) 90
  - (C) 800
  - (D) 900
- There are 45 vehicles in a parking lot. Three fifths of the vehicles are minivans. How many of the vehicles in the parking lot are minivans? (Lesson 7.3)
  - (A) 9
  - (B) 18
  - (C) 27
  - (D) 35