Section A: Practice Problems

1. **Pre-unit**

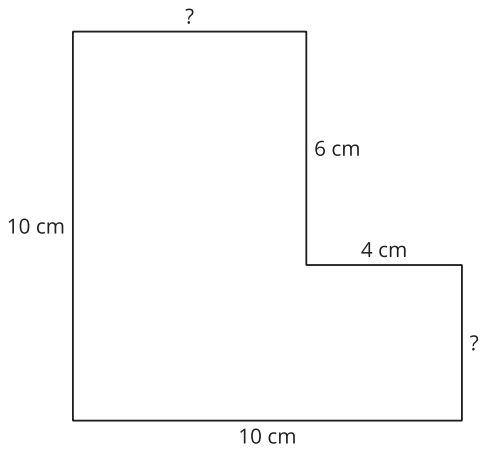
There are 63 students in the cafeteria. There are 9 students at each table.

a. At how many tables are the students seated?

b. Write a division equation to represent your answer.

2. **Pre-unit**

What is the area of this figure? Explain your reasoning.



3. **Pre-unit**

Select **all** expressions that are equivalent to $\frac{12}{5}$.

A. $6 \times \frac{2}{5}$

B. $5 \times \frac{1}{12}$

C. $12 \times \frac{1}{5}$

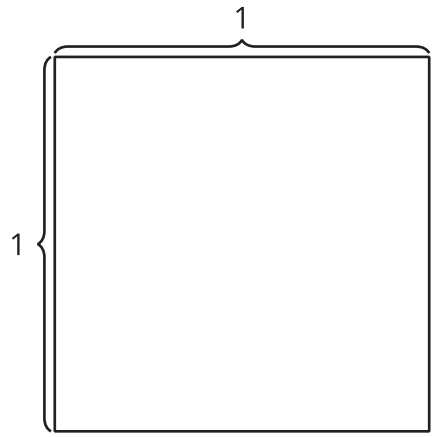
D. $8 \times \frac{4}{5}$

E. $4 \times \frac{3}{5}$

4. **Pre-unit**

Jada has 8 pennies. Each one weighs $\frac{5}{2}$ grams. How much do Jada's pennies weigh altogether? Explain your reasoning.

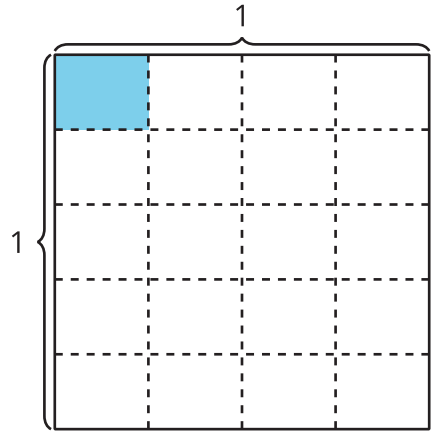
5. a. Shade $\frac{1}{2}$ of $\frac{1}{5}$ of the square.



b. Explain where you see $\frac{1}{2}$ of $\frac{1}{5}$ in your drawing.

(From Unit 3, Lesson 1.)

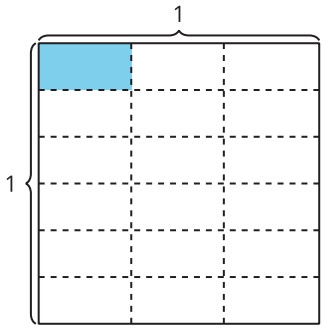
6. a. Write an expression for how much of the square is shaded.



b. Find the value of your expression.

(From Unit 3, Lesson 2.)

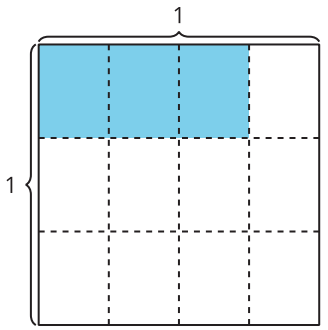
7. a. Write an equation representing the shaded part of the diagram.



b. Explain how the diagram shows each part of your equation.

(From Unit 3, Lesson 3.)

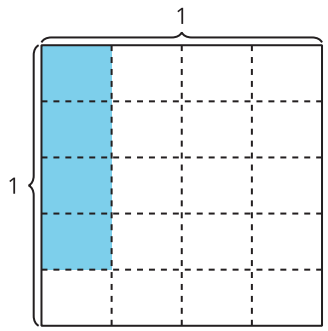
8. a. Write an expression for the shaded region of the square.



b. Explain how your expression matches the shaded region.

(From Unit 3, Lesson 4.)

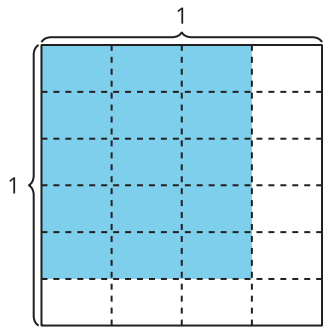
9. a. Write an expression for the area of the shaded region.



b. Explain how the diagram shows your expression.

(From Unit 3, Lesson 5.)

10. a. Write a multiplication expression for the area of the shaded region. Explain your reasoning.



b. What is the area of the shaded region in square units?

(From Unit 3, Lesson 6.)

11. Find the value that makes each equation true.

a. $\frac{7}{10} \times \frac{3}{5} = \_\_\_\_$

b. $\frac{2}{5} \times \_\_\_\_ = \frac{8}{45}$

c. $\_\_\_\_ \times \frac{4}{9} = \frac{28}{45}$

(From Unit 3, Lesson 7.)

12. This flag of Sweden is $3\frac{1}{5}$ inches wide and 2 inches tall. The rectangle in the upper right is $\frac{9}{5}$ inches wide and $\frac{4}{5}$ inch tall.

a. What is the area of the whole flag?

b. What is the area of the rectangle in the upper right?

(From Unit 3, Lesson 8.)

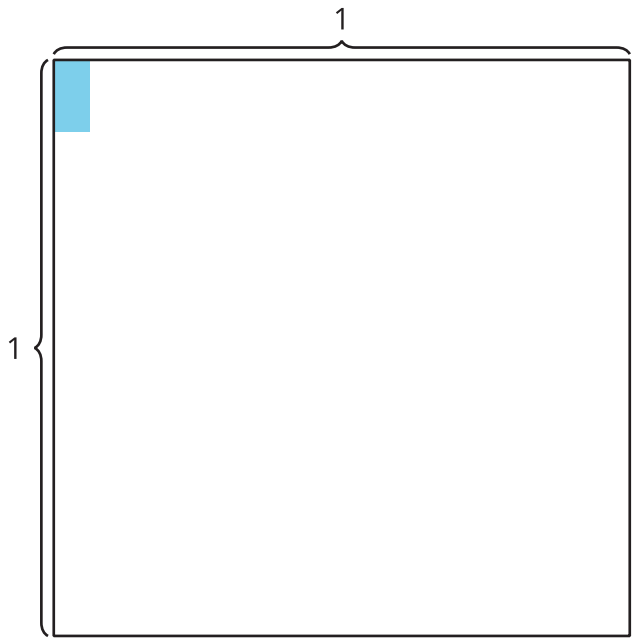
13. **Exploration**

On this American flag the width of the blue rectangle is $\frac{2}{5}$ the width of the flag.

What fraction of the area of the flag is the blue rectangle? Explain or show your reasoning.

14. **Exploration**

Jada folded a square piece of paper in half many times, sometimes horizontally and sometimes vertically. She shaded the folded piece of paper and then unfolded it. Here is a picture.



What fraction of the paper did Jada shade? Explain how you know.