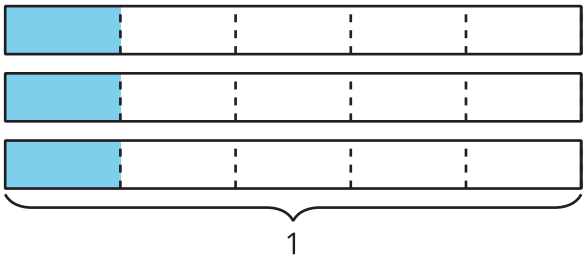
Assessment : Section B Checkpoint

Problem 1

Goals Assessed

- Connect division to multiplication of a whole number by a unit fraction.
- Explore the relationship between multiplication and division.

Statement



1. Explain how the diagram shows $3 \div 5$.
2. Explain how the diagram shows $3 \times \frac{1}{5}$.
3. What is the value of $3 \div 5$? Explain or show your reasoning.

Solution

1. There are 3 whole rectangles and 1 out of 5 equal shares of the rectangles is shaded so that's $3 \div 5$.
2. There are 3 shaded parts and each is $\frac{1}{5}$ of a whole rectangle so that's $3 \times \frac{1}{5}$.
3. $\frac{3}{5}$ because there are 3 shaded pieces and each is $\frac{1}{5}$ of a whole rectangle.

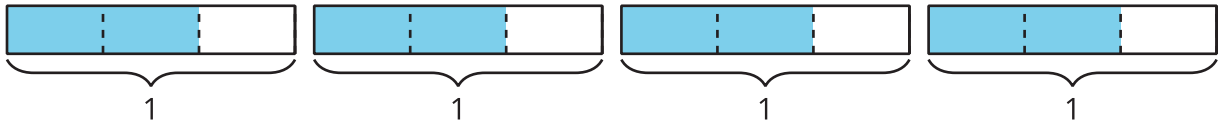
Problem 2

Goals Assessed

- Connect division to multiplication of a whole number by a non-unit fraction.
- Explore the relationship between multiplication and division.

Statement

Explain or show how each expression represents the shaded parts of the diagram.



1. $2 \times (4 \div 3)$
2. $4 \times \frac{2}{3}$
3. $4 \times 2 \times \frac{1}{3}$

Solution

Sample responses:

1. There are 2 groups of 4 rectangles divided into 3 equal parts so that's $2 \times (4 \div 3)$.
2. There are 4 groups of $\frac{2}{3}$ of a rectangle so that's $4 \times \frac{2}{3}$.
3. There are 4 groups of 2 small parts and each one is $\frac{1}{3}$ of a rectangle so that's $4 \times 2 \times \frac{1}{3}$.