

## Grade 4 Unit 3

### Lesson 5

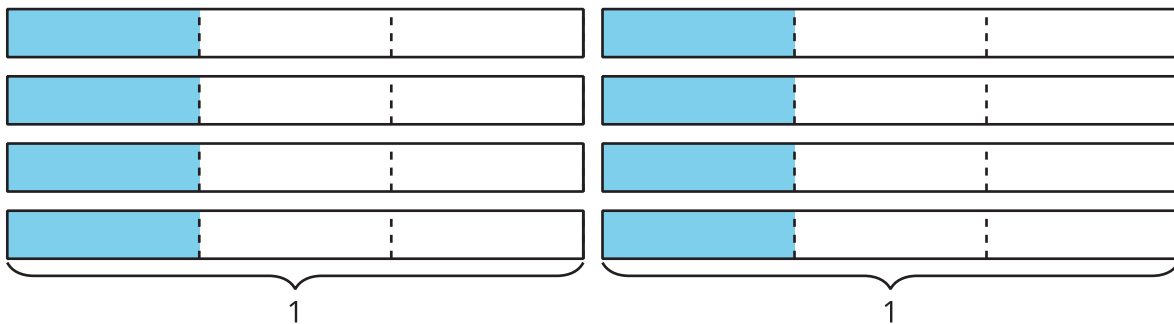
CC BY 2021 Illustrative Mathematics®

## Unit 3 Lesson 5: Equivalent Multiplication Expressions

### WU How Many Do You See? (Warm up)

#### Student Task Statement

How many thirds do you see? How do you see them?



### 1 Complete the Equations

#### Student Task Statement

1. Find the number that makes each equation true. Draw a diagram if it is helpful.

$$\frac{12}{5} = 12 \times \underline{\hspace{2cm}}$$

$$\frac{12}{5} = 3 \times \underline{\hspace{2cm}}$$

$$\frac{12}{5} = 6 \times \underline{\hspace{2cm}}$$

$$\frac{12}{5} = 2 \times \underline{\hspace{2cm}}$$

$$\frac{12}{5} = 4 \times \underline{\hspace{2cm}}$$

$$\frac{12}{5} = 1 \times \underline{\hspace{2cm}}$$

2. Here are two sets of numbers:

Set A:

1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11

Set B:

$\frac{1}{7}, \frac{2}{7}, \frac{3}{7}, \frac{4}{7}, \frac{5}{7}, \frac{6}{7}, \frac{7}{7}$

- a. Choose a number from set A and a number from set B to complete this equation and make it true:

$$\frac{6}{7} = \underline{\hspace{2cm}} \times \underline{\hspace{2cm}}$$

- b. Choose a different number from set A and a number from set B to complete the equation to make it true.

---


$$\frac{6}{7} = \underline{\quad} \times \underline{\quad}$$

3. Explain or show how you know that the two equations you wrote are both true.

## 2 Fractions and Matching Expressions

### Student Task Statement

Here is a set of expressions.

A.  
 $6 \times \frac{1}{10}$

B.  
 $2 \times 4 \times \frac{1}{9}$

C.  
 $4 \times \frac{1}{5}$

D.  
 $3 \times 2 \times \frac{1}{10}$

E.  
 $5 \times 2 \times \frac{1}{12}$

F.  
 $2 \times 2 \times \frac{1}{5}$

G.  
 $4 \times 4 \times \frac{1}{9}$

H.  
 $10 \times \frac{1}{12}$

I.  
 $4 \times \frac{1}{12}$

1. Match each expression to one of the following fractions, if possible. Record your matches. Be prepared to explain how you know there is or isn't a match.

$\frac{4}{5}$

$\frac{10}{12}$

$\frac{6}{10}$

$\frac{8}{9}$

2. Complete each equation to make it true. Try to do so without using unit fractions.

a.  $\frac{4}{5} = \underline{\quad} \times \underline{\quad}$

$\frac{4}{5} = \underline{\quad} \times \underline{\quad}$

b.  $\frac{10}{12} = \underline{\quad} \times \underline{\quad}$

$\frac{10}{12} = \underline{\quad} \times \underline{\quad}$

c.  $\frac{6}{10} = \underline{\quad} \times \underline{\quad}$

$\frac{6}{10} = \underline{\quad} \times \underline{\quad}$

d.  $\frac{8}{9} = \underline{\quad} \times \underline{\quad}$

$\frac{8}{9} = \underline{\quad} \times \underline{\quad}$

### Images for Activity Synthesis

