Illustrative Mathematics

Grade 3 Unit 5 Lesson 4 CC BY 2021 Illustrative Mathematics®

Unit 5 Lesson 4: Build Fractions from Unit Fractions

WU Number Talk: 3 and Another Factor (Warm up)

Student Task Statement

Find the value of each expression mentally.

- 3 × 3
- 7 × 3
- 10 × 3
- 3 × 17

1 Introduce Secret Fractions

Student Task Statement

The goal of the game is to be the first to build 2 secret fractions with unit fractions.

- 1. Make two stacks: one for secret fractions and one for unit fractions. Place all cards face down.
- 2. Each player draws 2 secret fraction cards. These are the fractions you are trying to make with your unit fractions.
- 3. On your turn, you can make one of these moves:
 - Pick up 1 unit fraction card.
 - Trade both of your secret fractions for 2 new secret fractions from the stack.
- 4. When you have enough unit fractions to make one of your secret fractions, shade your gameboard to represent your secret fraction. Then, pick a new secret fraction.
- 5. The first player to make 2 secret fractions wins.

Gameboard

1 whole			
$\frac{1}{2}$	1		$\frac{1}{2}$
<u>1</u> 3	1 3		<u>1</u> 3
$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$
$\frac{1}{6}$ $\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$ $\frac{1}{6}$
$\frac{1}{8}$ $\frac{1}{8}$	$\frac{1}{8}$ $\frac{1}{8}$ $\frac{1}{8}$	$\frac{1}{8}$ $\frac{1}{8}$	$\frac{1}{8}$ $\frac{1}{8}$
1 whole			
$\frac{1}{2}$	1		$\frac{1}{2}$
<u>1</u> 3	1 3		<u>1</u> 3
$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$
$\frac{1}{6}$ $\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$ $\frac{1}{6}$
$\frac{1}{8}$ $\frac{1}{8}$	$\frac{1}{8}$ $\frac{1}{8}$	$\frac{1}{8}$ $\frac{1}{8}$	$\frac{1}{8}$ $\frac{1}{8}$

2 Represent Fraction Situations

Student Task Statement

Here are four situations about playing Pilolo and four diagrams. Each diagram represents the length of a street where the game is played.

Represent each situation on a diagram. Be prepared to explain your reasoning.



- 1. A student walks $\frac{4}{8}$ the length of the street and hides a rock.
- 2. A student walks $\frac{2}{3}$ the length of the street and hides a penny.
- 3. A student walks $\frac{3}{4}$ the length of the street and hides a stick.

4. A student walks $\frac{5}{6}$ the length of the street and hides a penny.



5. This diagram represents the location of a hidden stick.

About what fraction of the length of the street did the student walk to hide it? Be prepared to explain how you know.