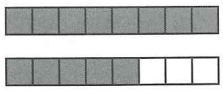
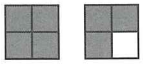
Sample Solutions

2. a)  b) 

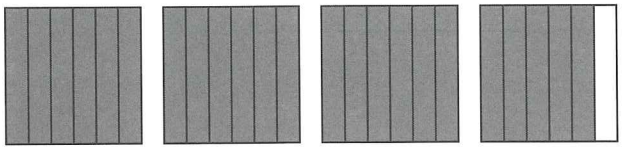
c)  d) 

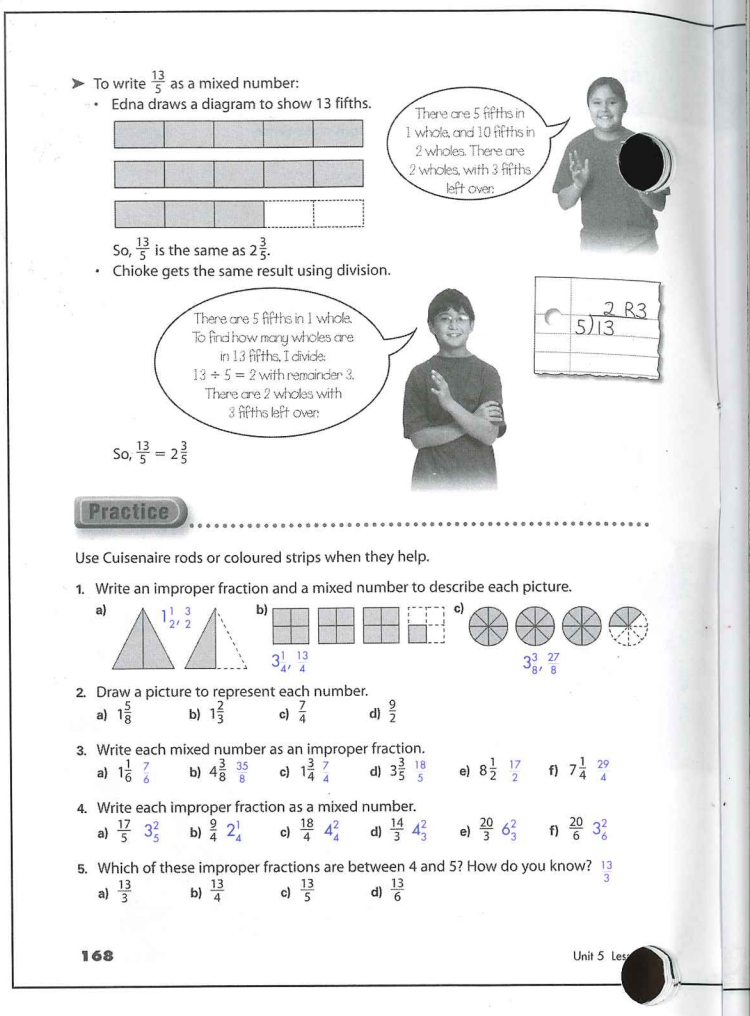
5. a) $\frac{13}{3} = 4\frac{1}{3}$ b) $\frac{13}{4} = 3\frac{1}{4}$ c) $\frac{13}{5} = 2\frac{3}{5}$ d) $\frac{13}{6} = 2\frac{1}{6}$
So, $\frac{13}{3}$ is between 4 and 5.

6. a) Mary sold $\frac{41}{12}$ or $3\frac{5}{12}$ bannock.
b) Five bannock are 60 pieces of bannock, so 60 − 41 or 19 pieces of bannock are left. Therefore, $\frac{19}{12}$ or $1\frac{7}{12}$ bannock are left.

7. One dollar = 4 quarters. $\$4 = 4 \times 4 = 16$ quarters.
So I do not have \$4.

8. 3 + 18 + 3 = 24 slices
24 ÷ 8 = 3
Three pizzas had been ordered.

9. 
She can serve 23 customers.



- Suppose you displayed 2 brown rods and 3 red rods. What mixed number would it represent? *($2\frac{3}{4}$)* What improper fraction? *($\frac{11}{4}$)*
- How do you know that $2\frac{3}{4}$ and $\frac{11}{4}$ represent the same amount?
(The brown rod represents 1 whole. 2 brown rods are equal to 8 quarters. 8 quarters plus 3 more quarters is 11 quarters.)
- How do you know that $3\frac{2}{5}$ and $\frac{17}{5}$ represent the same amount?
(5 fifths make 1 whole. 15 fifths make 3 wholes, and then I need 2 fifths more to make $\frac{17}{5}$.)

Use *Connect* to introduce methods for converting a mixed number to an improper fraction and vice versa. Ensure students relate these procedures to the concrete methods they used in *Explore*.

Practice

Have Cuisenaire rods or strips of coloured paper available.

Assessment Focus: Question 6

Students must calculate how many whole and how many part bannock are represented by 41 pieces. They must write this number as an improper fraction and as a mixed number.

Then they must figure out how many pieces are in five bannock, and compare this to how many were sold to figure out how many are left, then represent this number as a fraction of the five original bannock, both as an improper fraction and as a mixed number.

Students can play the Additional Activity *Fraction Train* (Master 5.9).

6. Mary baked 5 round bannock for a bake sale at the Chief Kahkewistahaw Community School in Saskatchewan. She cut each bannock into 12 equal pieces. Mary sold 41 pieces of bannock.
   a) How many bannock did Mary sell? Give your answer 2 ways. $\frac{41}{12}$, $3\frac{5}{12}$
   b) How many bannock are left? Give your answer 2 ways. $\frac{19}{12}$, $1\frac{7}{12}$

7. Suppose you have 14 quarters.
   Do you have $4? Explain. No

8. The pizza at Kwame's party is cut into eighths.
   Kwame eats 3 slices and the rest of the family eats 18 slices.
   There are 3 slices left over.
   How many pizzas had been ordered? 3

9. Maybelline has $3\frac{5}{6}$ loaves of bread in her diner in Regina.
   The whole loaves are cut into 6 equal slices.
   To how many customers can Maybelline serve a slice of bread? 23
   Draw a diagram to show your solution.

10. Hair scrunchies come in packages of 5.
    Suppose you have $2\frac{1}{5}$ of these packages to share among 4 friends.
    a) Do you have enough scrunchies to give each friend three scrunchies? How do you know? No
    b) Do you have enough scrunchies to give each friend two? How do you know? Yes

11. Suppose you get 0 as the remainder when you divide the numerator of an improper fraction by the denominator.
    What does that tell you?
    Use drawings and words to explain.

Reflect

What is the difference between a mixed number and an improper fraction?
Use pictures, words, and numbers to show how to rename an improper fraction as a mixed number.

ASSESSMENT FOCUS | Question 6

Unit 5 Lesson 2 **169**

10. a) $2\frac{1}{5}$ packages = 11 scrunchies
    $4 \times 3 = 12$
    I do not have enough scrunchies.
    b) $4 \times 2 = 8$
    So, I have enough scrunchies.

11. A zero remainder means the fraction is equivalent to a whole number.

REFLECT: A mixed number has a whole number part and a fraction part.
An improper fraction only has a fraction part.
It has a numerator greater than the denominator.
Here is one way to rename $\frac{7}{3}$ as a mixed number:
There are 3 thirds in 1 whole, so 7 thirds will make 2 wholes with 1 third left over.
$\frac{7}{3} = 2\frac{1}{3}$

ASSESSMENT FOR LEARNING

What to Look For

Conceptual Understanding

✔ Students can explain that a mixed number and an improper fraction both represent more than one whole.

Procedural Knowledge

✔ Students write mixed numbers as improper fractions and improper fractions as mixed numbers.

Problem-Solving Skills

✔ Students solve problems involving improper fractions and mixed numbers.

What to Do If You Don't See It

Check Further

Watch as students are working. Are they able to select an appropriate rod to represent one whole? Can they explain the reasoning behind the procedures they use to convert improper fractions to mixed numbers and vice versa?

Adjust Instruction

Encourage students to use Cuisenaire rods or paper strips to model mixed numbers and improper fractions.

Some students may benefit from using rods to demonstrate all the possible fractions that can be shown using each rod as one whole (for example, for the brown rod, the white rod is $\frac{1}{8}$, the red rod is $\frac{1}{4}$, and the pink rod is $\frac{1}{2}$.)