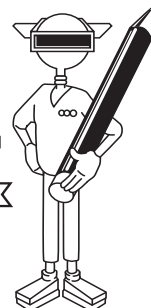




COURSE: **MSC III**  
 MODULE 3: **Fractions**  
 UNIT 1: **Proper and Improper Fractions**

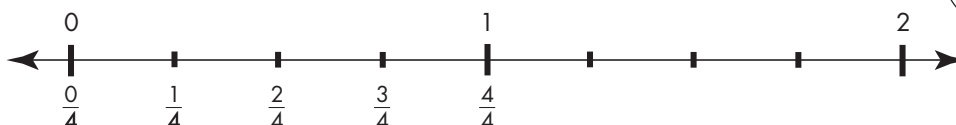
# Student Logbook



## Improper Fractions

**As you work through the tutorial, complete the following.**

1. What is your mission for this lesson? \_\_\_\_\_  
 \_\_\_\_\_
2. An improper fraction is a fraction whose numerator is \_\_\_\_\_ than or \_\_\_\_\_ to its denominator.
3. On the number line, the \_\_\_\_\_ number always lies to the right of the \_\_\_\_\_ number.
4. **a.** This number line is divided into equal parts. Label the remaining marks in the line.



- b.** List the improper fractions: \_\_\_\_\_
5. The fraction  $\frac{8}{4}$  means \_\_\_\_\_  $\div$  \_\_\_\_\_, so  $\frac{8}{4}$  is equal to \_\_\_\_\_.
6. The fraction  $\frac{6}{4}$  means  $6 \div 4$ , which equals \_\_\_\_\_ with a remainder of \_\_\_\_\_.
7. The fraction  $\frac{6}{4} = \underline{\hspace{1cm}} + \frac{\boxed{\hspace{1cm}}}{4}$ .
8. Match each number with the correct term.

$$\frac{6}{4}$$

Proper fraction

$$1$$

Whole number

$$\frac{2}{4}$$

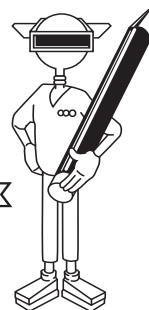
Improper fraction

### Key Words:

Proper fraction  
 Improper fraction  
 Mixed number

### Learning Objectives:

- Investigate improper fractions.
- Express an improper fraction as a mixed number.
- Plot improper fractions and mixed numbers on a number line.

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**9.** A mixed number is a number greater than one that has a \_\_\_\_\_ part and a \_\_\_\_\_ part.

**10.** Which of the following expressions is not equivalent to  $\frac{6}{4}$ ? \_\_\_\_\_

**a.**  $1\frac{1}{2}$

**b.**  $1\frac{3}{4}$

**c.**  $1\frac{2}{4}$

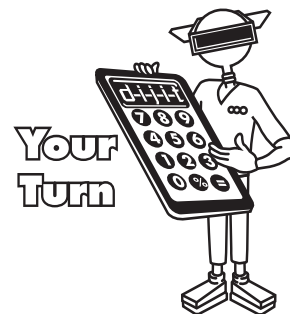
**d.**  $\frac{3}{2}$

**11.** To express an improper fraction as a mixed number:

- Divide the \_\_\_\_\_ by the \_\_\_\_\_ .
- Use the quotient for the \_\_\_\_\_ part of the mixed number.
- Use the remainder, expressed as a \_\_\_\_\_ fraction, as the fractional part of the mixed number.



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## Improper Fractions

1. Identify each of the following fractions as *proper* or *improper*.

a.  $\frac{1}{7}$  \_\_\_\_\_

b.  $\frac{3}{2}$  \_\_\_\_\_

c.  $\frac{6}{6}$  \_\_\_\_\_

d.  $\frac{2}{8}$  \_\_\_\_\_

e.  $\frac{9}{5}$  \_\_\_\_\_

f.  $\frac{5}{9}$  \_\_\_\_\_

2. On this number line, continue the pattern and label the numbers from 1 to 2.

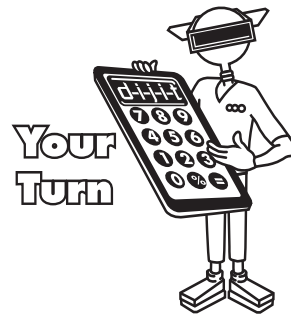


- a. How many of the fractions that you added to the number line are improper fractions? \_\_\_\_\_
- b. What improper fraction in this number line is equal to 2? \_\_\_\_\_
3. Complete the steps for expressing a fraction as a mixed number.

a.  $\frac{6}{5} = \underline{\hspace{1cm}} \div \underline{\hspace{1cm}}$   
 $= \underline{\hspace{1cm}}, \text{ remainder } \underline{\hspace{1cm}}$   
 $= \underline{\hspace{1cm}}$

b.  $\frac{20}{3} = \underline{\hspace{1cm}} \div \underline{\hspace{1cm}}$   
 $= \underline{\hspace{1cm}}, \text{ remainder } \underline{\hspace{1cm}}$   
 $= \underline{\hspace{1cm}}$

c.  $\frac{9}{4} = \underline{\hspace{1cm}} \div \underline{\hspace{1cm}}$   
 $= \underline{\hspace{1cm}}, \text{ remainder } \underline{\hspace{1cm}}$   
 $= \underline{\hspace{1cm}}$



4. Rename each improper fraction as a whole number or a mixed number.

a.  $\frac{11}{8}$  \_\_\_\_\_

b.  $\frac{5}{3}$  \_\_\_\_\_

c.  $\frac{7}{7}$  \_\_\_\_\_

d.  $\frac{14}{2}$  \_\_\_\_\_

e.  $\frac{12}{5}$  \_\_\_\_\_

f.  $\frac{32}{8}$  \_\_\_\_\_

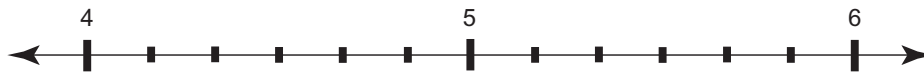
5. Plot and label  $\frac{26}{7}$  on the number line below.

6. Rewrite each fraction as either a mixed or a whole number. Then plot and label each number on the number line below.

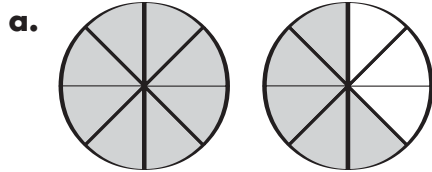
$\frac{27}{6} =$  \_\_\_\_\_

$\frac{30}{6} =$  \_\_\_\_\_

$\frac{35}{6} =$  \_\_\_\_\_



7. Each set of figures below is shaded to represent a number greater than 1. Write an improper fraction and the mixed number for each set of figures.



\_\_\_\_\_ = \_\_\_\_\_



\_\_\_\_\_ = \_\_\_\_\_