

# Improper Fractions and Mixed Numbers

A mixed number combines a whole number with a fraction. It is greater than one.

An improper fraction has a numerator that is larger than its denominator.

## How to Write an Improper Fraction as a Mixed Number

Write  $\frac{12}{5}$  as a mixed number.

Divide the numerator by the denominator.

The quotient is the whole number in the mixed number.

$$\begin{array}{r} 2 \\ 5 \overline{)12} \\ \underline{-10} \\ 2 \end{array}$$

$2 \frac{2}{5}$

The remainder is the numerator. The denominator stays the same.

$$\frac{12}{5} = 2 \frac{2}{5}$$

## How to Write a Mixed Number as an Improper Fraction

Multiply the denominator by the whole number.

$$3 \frac{2}{5}$$

$$5 \times 3 = 15$$

Then add the numerator.  $15 + 2 = 17$

Write this number for the numerator.  $\longrightarrow 17$   
Use the original denominator.  $\longrightarrow 5$

$$3 \frac{2}{5} = \frac{17}{5}$$

1. Draw a picture to show  $4\frac{2}{3}$ .

For 2–4, write each improper fraction as a whole number or mixed number in simplest form.

2.  $\frac{30}{20}$  \_\_\_\_\_

3.  $\frac{66}{20}$  \_\_\_\_\_

4.  $\frac{24}{14}$  \_\_\_\_\_

Write each mixed number as an improper fraction.

5.  $4\frac{1}{3}$  \_\_\_\_\_

6.  $1\frac{20}{50}$  \_\_\_\_\_

7.  $8\frac{7}{8}$  \_\_\_\_\_

8. Write 6 as an improper fraction with a denominator of 10. \_\_\_\_\_

Name \_\_\_\_\_

# Improper Fractions and Mixed Numbers

1. Draw a picture to show  $\frac{8}{6}$ .2. Draw a picture to show  $3\frac{5}{6}$ .

Write each improper fraction as a whole number or mixed number in simplest form.

3.  $\frac{30}{6}$  \_\_\_\_\_

4.  $\frac{47}{9}$  \_\_\_\_\_

5.  $\frac{52}{7}$  \_\_\_\_\_

Write each mixed number as an improper fraction.

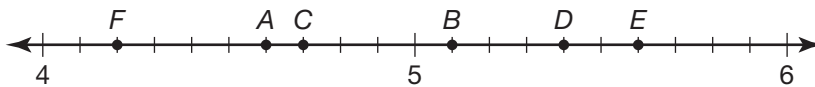
6.  $4\frac{4}{5}$  \_\_\_\_\_

7.  $13\frac{3}{4}$  \_\_\_\_\_

8.  $9\frac{5}{8}$  \_\_\_\_\_

9. Write 8 as an improper fraction with a denominator of 4. \_\_\_\_\_

Which letter on the number line corresponds to each number?



10.  $\frac{27}{5}$  \_\_\_\_\_

11.  $4\frac{7}{10}$  \_\_\_\_\_

12.  $4\frac{3}{5}$  \_\_\_\_\_

13. Which number does the model represent?



A  $\frac{12}{8}$

B  $2\frac{3}{8}$

C  $2\frac{4}{7}$

D  $\frac{20}{8}$

14. Can you express  $\frac{9}{9}$  as a mixed number? Why or why not?

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