

# Reciprocals

# For Learning to Happen!



- Keep your homework out to use as **scratch paper**.
- Remove all other thoughts from your mind.
- Pay close attention to this lesson.
- Try all of the examples.
- Ignore all other distractions.

# Change this improper fraction to a mixed number.

$$\frac{7}{3} = 3 \overline{)7} \begin{array}{r} 2 \text{ r } 1 \\ -6 \\ \hline 1 \end{array} \longrightarrow 2\frac{1}{3}$$

Put your remainder over  
the denominator.

**Change this improper fraction  
to a mixed number.**

$$\frac{9}{2} = 2 \overline{)9} \begin{array}{r} 4 \text{ r } 1 \\ -8 \\ \hline 1 \end{array} \longrightarrow 4\frac{1}{2}$$

Put your remainder over  
the denominator.

# Reciprocals

**Two numbers are reciprocals if their product is one.**

**Example:**  $\frac{3}{4} \times \frac{4}{3} = \frac{12}{12} = 1$

# Reciprocals

**Two numbers are reciprocals if their product is one.**

**Example:**  $\frac{\overset{1}{\cancel{3}}}{\underset{1}{\cancel{4}}} \times \frac{\overset{1}{\cancel{4}}}{\underset{1}{\cancel{3}}} = \frac{1}{1} = 1$

# Reciprocals

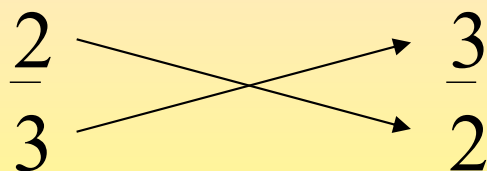
Hint to find a reciprocal:

JUST **FLIP** THE  
FRACTION OVER!

# Reciprocals

Write the reciprocal of  $\frac{2}{3}$ .

To write the reciprocal of  $\frac{2}{3}$ , switch the **numerator** and **denominator**.



**CHECK**  $\frac{2}{3} \cdot \frac{3}{2} = \frac{6}{6} = 1$



# Reciprocals

Write the reciprocal of the number.

1.  $\frac{5}{6}$

**ANSWER**

$\frac{6}{5}$

2.  $\frac{4}{11}$

**ANSWER**

$\frac{11}{4}$

3.  $\frac{2}{7}$

**ANSWER**

$\frac{7}{2}$

4.  $\frac{8}{5}$

**ANSWER**

$\frac{5}{8}$

# Reciprocals

Write the reciprocal of the number.

5.  $\frac{6}{5}$       **ANSWER**       $\frac{5}{6}$

6.  $\frac{8}{9}$       **ANSWER**       $\frac{9}{8}$

7.  $\frac{19}{17}$       **ANSWER**       $\frac{17}{19}$

8.  $\frac{3}{20}$       **ANSWER**       $\frac{20}{3}$

# Reciprocals

**Write the reciprocal of 9.**

$$9 = \frac{9}{1}$$

**Rewrite whole number as a fraction.**

$$\frac{9}{1} \rightarrow \frac{1}{9}$$

**Switch numerator and denominator.**

**CHECK**  $9 \cdot \frac{1}{9} = \frac{9}{9} = 1$

# Reciprocals

Write the reciprocal of the number.

9. 2      **ANSWER**  $\frac{1}{2}$

10. 7      **ANSWER**  $\frac{1}{7}$

11. 13      **ANSWER**  $\frac{1}{13}$

12. 1      **ANSWER**  $\frac{1}{1}$  or 1

# Change this mixed number to an improper fraction

Multiply the whole number  
times the denominator.

Add your answer to the  
numerator.

Put your new number  
over the denominator.

$$4\frac{1}{2} = \frac{9}{2}$$

# Change this mixed number to an improper fraction

Multiply the whole number  
times the denominator.

Add your answer to the  
numerator.

Put your new number  
over the denominator.

$$6 \frac{2}{3} = \frac{20}{3}$$

# Write the Reciprocal of a Mixed Number

To write a reciprocal of a mixed number, you must **change your mixed number** to an improper fraction first.

$$8\frac{1}{2} = \frac{17}{2}$$

Then write the reciprocal of your improper fraction.

$$\frac{17}{2} \longrightarrow \frac{2}{17}$$

# Write the Reciprocal of a Mixed Number

Write the reciprocal of  $2\frac{3}{4}$ .

$$2\frac{3}{4} = \frac{11}{4}$$

Rewrite mixed number as an improper fraction.

$$\frac{11}{4} \begin{array}{c} \nearrow \\ \searrow \end{array} \frac{4}{11}$$

Switch numerator and denominator.

**CHECK**  $\frac{11}{4} \cdot \frac{4}{11} = \frac{44}{44} = 1$



# Write the Reciprocal of a Mixed Number

Write the reciprocal of the number.

1.  $1\frac{7}{8}$

**ANSWER**

$$\frac{8}{15}$$

2.  $4\frac{2}{9}$

**ANSWER**

$$\frac{9}{38}$$

3.  $10\frac{1}{5}$

**ANSWER**

$$\frac{5}{51}$$

**Hint: Change the mixed number  
to an improper fraction 1st**

# Write the Reciprocal of a Mixed Number

Write the reciprocal of the number.

4.  $3\frac{5}{6}$

**ANSWER**

$$\frac{6}{23}$$

5.  $7\frac{3}{4}$

**ANSWER**

$$\frac{4}{31}$$

6.  $12\frac{2}{3}$

**ANSWER**

$$\frac{3}{38}$$

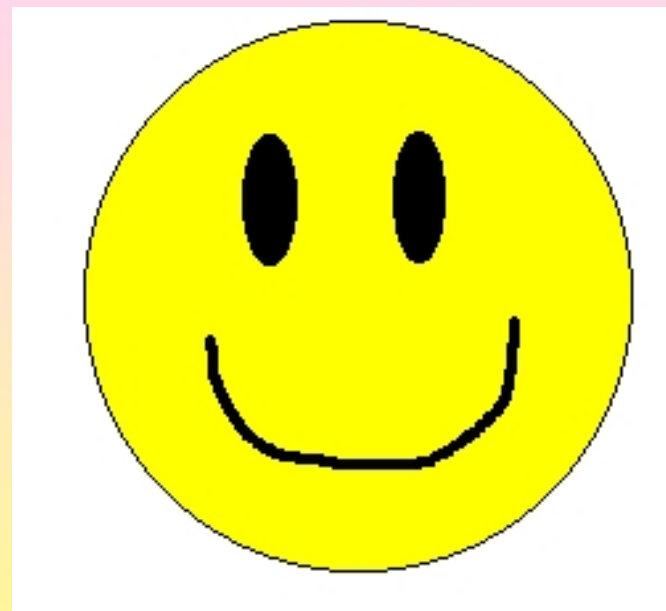
7.  $8\frac{9}{10}$

**ANSWER**

$$\frac{10}{89}$$

# Write the Reciprocal of a Mixed Number

THE END!  
Take out your  
study guide.



# #18 Reciprocals

Two numbers are reciprocals if their **product is one**.

**Example:**  $\frac{2}{5} \times \frac{5}{2} = \frac{10}{10} = 1$

To find the reciprocal just **flip** the fraction over.

**Change your mixed number** to an improper fraction to find the reciprocal.

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

# Extras

# # Reciprocals

Two numbers are reciprocals if their product is one.

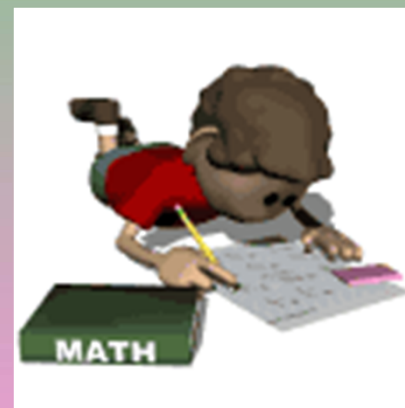
Example:  $\frac{2}{5} \times \frac{5}{2} = \frac{10}{10} = 1$

To find the reciprocal just **flip** the fraction over.

# # Write the Reciprocal of a Mixed Number

To write a reciprocal of a mixed number, you must **change your mixed number** to an improper fraction first.

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



Then write the reciprocal of your improper fraction.

$$\frac{17}{3} \longrightarrow \frac{3}{17}$$