

# Pre-Algebra Workbook

Mixed numbers



#### MIXED NUMBERS AND IMPROPER FRACTIONS

■ 1. Mixed numbers are a representation of what operation (addition, subtraction, multiplication, division)?

- 2. Convert 15/4 into a mixed number.
- 3. Convert 34/6 into a mixed number.
- 4. Write -114/25 as a mixed number.
- 5. Convert the mixed number into an improper fraction.

$$-2\frac{1}{6}$$

■ 6. Convert the mixed number into an improper fraction.

$$8\frac{4}{9}$$



# ADDING AND SUBTRACTING MIXED NUMBERS

■ 1. Simplify the expression.

$$5\frac{2}{3} + 1\frac{1}{12}$$

2. Simplify the expression.

$$8\frac{7}{8} - 2\frac{1}{8}$$

■ 3. Simplify the expression.

$$7\frac{4}{5} - 6\frac{1}{15}$$

■ 4. Simplify the expression.

$$15\frac{1}{2} - 11\frac{1}{4}$$

■ 5. Joey and Alex are both solving the following problem.

$$2\frac{1}{3} + 1\frac{3}{5}$$

Joey takes 2 + 1 = 3 and then takes

$$\frac{1}{3} + \frac{3}{5} = \frac{14}{15}$$

Then he adds them together to get

$$3\frac{14}{15}$$

Alex decides to change both into improper fractions before adding. He gets

$$2\frac{1}{3} = \frac{7}{3}$$
 and  $1\frac{3}{5} = \frac{8}{5}$ 

Then she finds common denominators and adds them together to get

Who solved this problem correctly?

■ 6. Simplify the expression.

$$3\frac{2}{5} + \frac{3}{10} - 2\frac{3}{5}$$



### MULTIPLYING AND DIVIDING MIXED NUMBERS

- 1. When we multiply and divide mixed numbers, we need to change the mixed numbers into \_\_\_\_\_\_ fractions before we do the multiplication or division.
- 2. Simplify the expression.

$$3\frac{3}{7} \cdot 1\frac{1}{7}$$

■ 3. Simplify the expression.

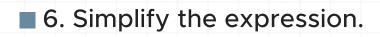
$$5\frac{1}{5} \cdot 2\frac{2}{3}$$

■ 4. Simplify the expression.

$$2\frac{3}{4} \div 5\frac{1}{8}$$

■ 5. Simplify the expression.

$$4\frac{5}{9} \div 2\frac{1}{4}$$



$$1\frac{4}{5} \div 3\frac{3}{8}$$



# **RELATIONSHIPS OF NUMBERS**

■ 1. Which fraction is larger?

$$\frac{1}{8}$$
 or  $\frac{1}{6}$ 

■ 2. Which fraction is smaller?

$$\frac{3}{7}$$
 or  $\frac{3}{8}$ 

- $\blacksquare$  3. Find a number that's 1/5 of the way from 3/10 to 2/5.
- 4. Find a number that's 2/3 of the way from -2/3 to 1/4.
- $\blacksquare$  5. Find the fraction halfway between 1/2 and 2/5.
- $\blacksquare$  6. Find the fraction halfway between 1/10 and 8/13.

#### **ADDING MIXED MEASURES**

■ 1. Add the mixed measures.

4 seconds, 11 minutes, 3 hours, 35 minutes, 56 minutes, 35 seconds

■ 2. Add the mixed measures.

34 inches, 2 yards, 5 feet, 8 inches, 13 feet, 1 yard

■ 3. Add the mixed measures.

25 seconds, 1 hour, 15 minutes, 45 seconds, 22 minutes

■ 4. Add the mixed measures.

13 inches, 45 feet, 35 inches, 27 feet, 9 yards

■ 5. Add the mixed measures.

1 foot, 38 inches

■ 6. Add the mixed measures.



