Pre-Algebra Workbook

Mixed numbers

krista king MATH

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

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

Then she finds common denominators and adds them together to get

$$\frac{59}{15}$$

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.

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

6. Simplify the expression.

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

RELATIONSHIPS OF NUMBERS

■ 1. Which fraction is larger?

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

■ 2. Which fraction is smaller?

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

■ 3. Find a number that's $1/5$ of the way from $2/5$ to $3/10$.

■ 4. Find a number that's $2/3$ of the way from $-2/3$ to $1/4$.

■ 5. Find the fraction halfway between $1/2$ and $2/5$.

■ 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.

1 hour, 85 minutes, 55 seconds, 20 minutes

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