

LESSON 19: Add and Subtract Mixed Numbers - Unlike Denominators

Warm-Up

Directions: Find the sum or difference. Simplify answers if necessary.

1. $\frac{2}{6} + \frac{2}{3} =$ _____

2. $\frac{2}{5} + \frac{3}{10} =$ _____

3. $\frac{7}{9} - \frac{1}{3} =$ _____

4. $\frac{5}{8} - \frac{1}{4} =$ _____

LESSON 19: Add and Subtract Mixed Numbers - Unlike Denominators

Directions: Complete the following SOLVE problem with your teacher. You will only complete the S step.

Aria’s father is laying tile in their new kitchen. The length of one side of the room is 17 feet. Each of the tiles has a length of $1\frac{3}{10}$ feet. What is the length of two tiles placed together?

S Underline the question.
 This problem is asking me to find

Directions: Complete this page with your teacher and partner.

1. Problem: $1\frac{1}{6} + \frac{1}{2} =$

Think about this:
 Are the denominators the same?
 What is the common denominator?

Mixed number to improper fraction

Equivalent fraction for $\frac{1}{2}$

Sum as improper fraction:

Sum as mixed number in simplest form.

2. Problem: $1\frac{1}{4} + \frac{2}{3} =$

Think about this:
 Are the denominators the same?
 What is the common denominator?

Mixed number to improper fraction

Equivalent fraction for $\frac{2}{3}$

Sum as improper fraction:

Sum as mixed number in simplest form.

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Directions: Complete this page with your partner.

3.

Problem: $1\frac{3}{10} + \frac{1}{5} =$

Think about this:
Are the denominators the same?
What is the common denominator?

Mixed number to improper fraction

Equivalent fraction for $\frac{1}{5}$

Sum as improper fraction:

Sum as mixed number in simplest form.

4.

Problem: $1\frac{1}{3} + \frac{1}{2} =$

Think about this:
Are the denominators the same?
What is the common denominator?

Mixed number to improper fraction

Equivalent fraction for $\frac{1}{2}$

Sum as improper fraction:

Sum as mixed number in simplest form.

LESSON 19: Add and Subtract Mixed Numbers - Unlike Denominators

Directions: Complete this page with your teacher and partner.

1. Problem: $1\frac{1}{2} + \frac{1}{3} =$

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Mixed number to improper fraction

Equivalent fraction for $\frac{1}{3}$

Rewrite number sentence and add

Is sum an improper fraction?
Change to mixed number

Simplify

2. Problem: $1\frac{2}{5} + \frac{3}{10} =$

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Mixed number to improper fraction

Equivalent fraction for $\frac{3}{10}$

Rewrite number sentence and add

Is sum an improper fraction?
Change to mixed number

Simplify

LESSON 19: Add and Subtract Mixed Numbers - Unlike Denominators

Directions: Complete this page with your partner.

3. Problem: $1\frac{1}{6} + \frac{1}{3} =$

Mixed number to improper fraction

Equivalent fraction for $\frac{1}{3}$

Rewrite number sentence and add

Is sum an improper fraction?
Change to mixed number

Simplify

4. Problem: $1\frac{2}{4} + \frac{1}{3} =$

Mixed number to improper fraction

Equivalent fraction for $\frac{1}{3}$

Rewrite number sentence and add

Is sum an improper fraction?
Change to mixed number

Simplify

LESSON 19: Add and Subtract Mixed Numbers - Unlike Denominators

Directions: Complete this page with your teacher and partner.

| Draw your problem. | Legally trade, changing mixed number(s) to improper fractions with common denominators. | Change improper fraction to mixed number sum. | Write numerically what you have in the previous column. Change the improper fraction sums to mixed numbers. |
|-------------------------------------|---|---|---|
| 1. $1\frac{2}{5} + \frac{1}{2} =$ | | | |
| 2. $1\frac{2}{12} + 1\frac{1}{4} =$ | | | |
| 3. $1\frac{2}{6} + 2\frac{2}{3} =$ | | | |
| 4. $2\frac{1}{3} + 1\frac{1}{6}$ | | | |

LESSON 19: Add and Subtract Mixed Numbers - Unlike Denominators

Directions: Complete this page with your teacher and partner.

| | |
|---|--|
| <p>1. $2\frac{1}{8}$ + $1\frac{1}{4}$ -----</p> <p>Are denominators common? Least Common Multiple: Addends as improper fractions: Rewrite number sentence and sum as improper fraction and mixed number:</p> | <p>4. $1\frac{2}{3}$ + $1\frac{4}{6}$ -----</p> <p>Are denominators common? Least Common Multiple: Addends as improper fractions: Rewrite number sentence and sum as improper fraction and mixed number:</p> |
| <p>2. $1\frac{2}{8} + 2\frac{1}{2} =$</p> <p>Are denominators common? Least Common Multiple: Addends as improper fractions: Rewrite number sentence and sum as improper fraction and mixed number:</p> | <p>5. $2\frac{1}{2} + 1\frac{1}{3} =$</p> <p>Are denominators common? Least Common Multiple: Addends as improper fractions: Rewrite number sentence and sum as improper fraction and mixed number:</p> |
| <p>3. $2\frac{1}{3}$ + $3\frac{1}{4}$ -----</p> <p>Are denominators common? Least Common Multiple: Addends as improper fractions: Rewrite number sentence and sum as improper fraction and mixed number:</p> | <p>6. $1\frac{1}{5}$ + $1\frac{5}{10}$ -----</p> <p>Are denominators common? Least Common Multiple: Addends as improper fractions: Rewrite number sentence and sum as improper fraction and mixed number:</p> |

LESSON 19: Add and Subtract Mixed Numbers - Unlike Denominators

Directions: Complete this page with your teacher and partner.

1. Problem: $1\frac{2}{6} - \frac{2}{3} =$

Think about this:
Are the denominators the same?
What is the common denominator?

Mixed number to improper fraction

Equivalent fraction for $\frac{2}{3}$

Difference as improper fraction:

Difference as fraction or mixed number in simplest form.

2. Problem: $1\frac{3}{4} - \frac{1}{3} =$

Think about this:
Are the denominators the same?
What is the common denominator?

Mixed number to improper fraction

Equivalent fraction for $\frac{1}{3}$

Difference as improper fraction:

Difference as fraction or mixed number in simplest form.

LESSON 19: Add and Subtract Mixed Numbers - Unlike Denominators

Directions: Complete this page with your partner.

3. Problem: $1\frac{1}{2} - \frac{3}{4} =$

Think about this:
Are the denominators the same?
What is the common denominator?

Mixed number to improper fraction

Equivalent fraction for $\frac{3}{4}$

Difference as improper fraction:

Difference as fraction or mixed number in simplest form.

4. Problem: $1\frac{1}{3} - \frac{1}{2} =$

Think about this:
Are the denominators the same?
What is the common denominator?

Mixed number to improper fraction

Equivalent fraction for $\frac{1}{2}$

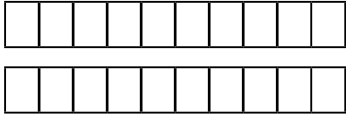
Difference as improper fraction:

Difference as fraction or mixed number in simplest form.

LESSON 19: Add and Subtract Mixed Numbers - Unlike Denominators

Directions: Complete this page with your teacher and partner.

1. Problem: $1\frac{1}{2} - \frac{4}{5} =$



Mixed number to improper fraction

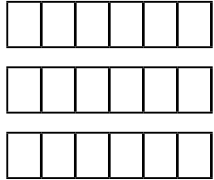
Equivalent fraction for $\frac{4}{5}$

Rewrite number sentence and subtract

Is difference an improper fraction?
Change to mixed number

Simplify

2. Problem: $2\frac{5}{6} - 1\frac{1}{3} =$



Mixed number to improper fraction

Mixed number to improper fraction

Rewrite number sentence and subtract

Is difference an improper fraction?
Change to mixed number

Simplify

LESSON 19: Add and Subtract Mixed Numbers - Unlike Denominators

Directions: Complete this page with your partner.

3. Problem: $2\frac{3}{10} - 1\frac{4}{5} =$

Mixed number to improper fraction

Mixed number to improper fraction

Rewrite number sentence and subtract

Is difference an improper fraction?
Change to mixed number

Simplify

4. Problem: $4\frac{1}{2} - 2\frac{5}{8} =$

Mixed number to improper fraction

Mixed number to improper fraction

Rewrite number sentence and subtract

Is difference an improper fraction?
Change to mixed number

Simplify

LESSON 19: Add and Subtract Mixed Numbers - Unlike Denominators

Directions: Complete this page with your teacher and partner.

| | Legally trade, changing mixed number(s) to improper fractions with common denominators. | Subtract subtrahend from minuend by crossing out subtrahend on minuend. | Write numerically what you have in the previous column. Change the improper fraction differences to mixed numbers. |
|------------------------------------|---|---|--|
| 1. $1\frac{1}{3} - \frac{3}{6} =$ | | | |
| 2. $2\frac{1}{2} - 1\frac{1}{3} =$ | | | |
| 3. $3\frac{3}{8} - 1\frac{3}{4} =$ | | | |
| 4. $3\frac{1}{4} - 1\frac{1}{3} =$ | | | |

LESSON 19: Add and Subtract Mixed Numbers - Unlike Denominators

Directions: Complete this page with your teacher and partner.

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|--|--|
| <p>1. $3\frac{1}{4}$ $- 2\frac{3}{8}$ <hr/></p> <p>Are denominators common? Least Common Multiple: Minuend as improper fraction: Subtrahend as improper fraction: Rewrite number sentence with difference as improper fraction to mixed number:</p> | <p>4. $4\frac{1}{3}$ $- 1\frac{7}{9}$ <hr/></p> <p>Are denominators common? Least Common Multiple: Minuend as improper fraction: Subtrahend as improper fraction: Rewrite number sentence with difference as improper fraction to mixed number:</p> |
| <p>2. $5\frac{1}{5}$ $- 3\frac{1}{2}$ <hr/></p> <p>Are denominators common? Least Common Multiple: Minuend as improper fraction: Subtrahend as improper fraction: Rewrite number sentence with difference as improper fraction to mixed number:</p> | <p>5. $2\frac{2}{12} - 1\frac{2}{4} =$</p> <p>Are denominators common? Least Common Multiple: Minuend as improper fraction: Subtrahend as improper fraction: Rewrite number sentence with difference as improper fraction to mixed number:</p> |
| <p>3. $6\frac{1}{3} - 2\frac{1}{2} =$</p> <p>Are denominators common? Least Common Multiple: Minuend as improper fraction: Subtrahend as improper fraction: Rewrite number sentence with difference as improper fraction to mixed number:</p> | <p>6. $3\frac{5}{6} - 1\frac{2}{3} =$</p> <p>Are denominators common? Least Common Multiple: Minuend as improper fraction: Subtrahend as improper fraction: Rewrite number sentence with difference as improper fraction to mixed number:</p> |

LESSON 19: Add and Subtract Mixed Numbers - Unlike Denominators

Directions: Complete the following SOLVE problem with your teacher.

Aria’s father is laying tile in their new kitchen. The length of one side of the room is 17 feet. Each of the tiles has a length of $1\frac{3}{10}$ feet. What is the length of two tiles placed together?

S Underline the question.

This problem is asking me to find

O Identify the facts.

Eliminate the unnecessary facts.

List the necessary facts.

L Choose an operation or operations.

Write in words what your plan of action will be.

V Estimate your answer.

Carry out your plan.

E Does your answer make sense? (Compare your answer to the question.)

Is your answer reasonable? (Compare your answer to the estimate.)

Is your answer accurate? (Check your work.)

Write your answer in a complete sentence.

LESSON 19: Add and Subtract Mixed Numbers - Unlike Denominators

Directions: Complete each mixed number problem. Simplify all sums and differences.

1. $2\frac{3}{10} + 1\frac{2}{5} =$

2. $5\frac{1}{3} - 2\frac{3}{4} =$

3. $2\frac{1}{3} + \frac{4}{9} =$

4. $4\frac{3}{8} - 2\frac{3}{4} =$

5. $2\frac{6}{10} + \frac{2}{5} =$

6. $3\frac{1}{2} - 1\frac{2}{3} =$

7. $3\frac{1}{2} + \frac{3}{4} =$

8. $5\frac{1}{6} - 3\frac{1}{3} =$

9. $2\frac{3}{8} + 4\frac{1}{2} =$

10. $2\frac{1}{4} - 1\frac{1}{2} =$

LESSON 19: Add and Subtract Mixed Numbers - Unlike Denominators

Homework

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Name _____ Date _____

Directions: Complete each mixed number problem. Simplify all sums and differences.

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

2. $2\frac{1}{3} - 1\frac{1}{9} =$

3. $6\frac{1}{8} + 3\frac{3}{4} =$

4. $3\frac{2}{5} - 1\frac{1}{2} =$

5. $4\frac{1}{3} + \frac{1}{2} =$

6. $2\frac{2}{3} - 1\frac{3}{4} =$

7. $1\frac{3}{10} + \frac{3}{5} =$

8. $3\frac{1}{6} - 1\frac{1}{3} =$

9. $3\frac{4}{6} + 5\frac{2}{3} =$

10. $10\frac{1}{4} - 2\frac{1}{2} =$