Tier 3
Intervention Lessons

4.NF.3c

Learning Target: I will add and subtract mixed numbers with like denominators

Readiness for 5.NF.1: Add and subtract mixed numbers with different denominators

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Tier 3 Intervention Planning Guide

Learning Target: I will add and subtract mixed numbers with like denominators

Readiness for adding and subtracting mixed numbers with different denominators

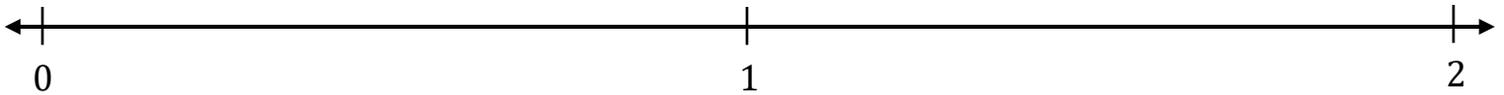| Recommended Actions	
Beginning (5 min.)	➢ Review the learning target with the whole group ➢ Ask each student to set a goal for the day based on their previous Quick Check Score ➢ Have each student use a highlighter to plot their goal for the day
Middle (15 min.)	➢ Model solving a word problem – "I do" *(Sessions 1, 3 and 6 only)* ➢ Guided Practice – "We do" **Sessions 1 and 2:** Use fraction strips to add and subtract mixed numbers with like denominators **Sessions 3, 4 and 5:** Use number lines to add and subtract mixed numbers with like denominators **Sessions 6, 7 and 8:** Use understanding of whole numbers and fractional parts to add and subtract mixed numbers with like denominators
End (10 min.)	➢ Bring the students back together. ➢ Ask students to reflect on their progress towards the learning target 　o What did I learn today about adding and subtracting mixed numbers with the like denominators? 　o How confident do you feel about adding and subtracting mixed numbers with the like denominators on my own? (Thumbs up, down, or sideways) ➢ Assess each student's progress using the next **Quick Check** form ➢ Guide students to self-correct their **Quick Check** ➢ Guide students to chart their progress in their **Growth Chart** 　o If not using Delta Math lessons, record the activity in the table ➢ Collect each student's **Quick Check** and **Growth Chart**
After Session 6	➢ Differentiation Options: 　o Allow students who met the learning goal to work independently while others do the guided practice during the next session 　o Exit students who met the learning goal for a third time ➢ Problem solve with a team to plan additional support for students who do not meet the learning goal within 8 sessions

Learning Target: I will add and subtract mixed numbers with like denominators

Readiness for adding and subtracting mixed numbers with different denominators

Kristin and her friend both had a string of licorice that was 1 foot long. After eating some, Kristin had $\frac{3}{4}$ of a foot left and her friend had $\frac{2}{4}$ of a foot left. If they combine their remaining licorice, how much do they have left altogether?

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<---+-------------------------------+-------------------------------+--->
    0                               1                               2
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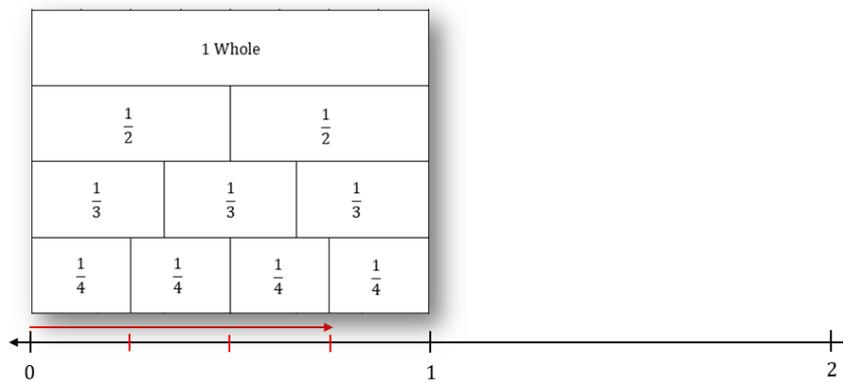
Session 1: Modeling (I Do – Visual Support)

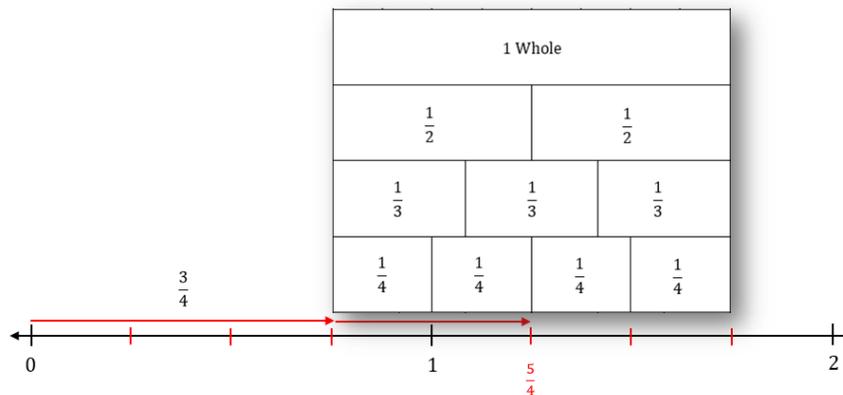**Learning Target:** I will add and subtract mixed numbers with like denominators

Readiness for adding and subtracting mixed numbers with different denominators

Kristin and her friend both had a string of licorice that was 1 foot long. After eating some, Kristin had $\frac{3}{4}$ of a foot left and her friend had $\frac{2}{4}$ of a foot left. If they combine their remaining licorice, how much do they have left altogether?
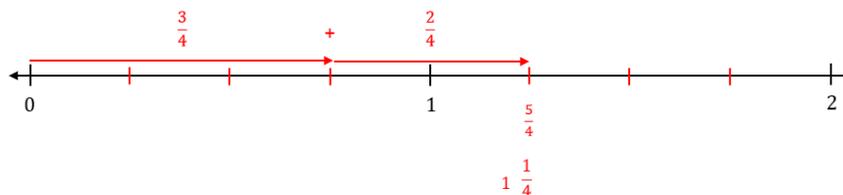
Step 1: Draw $\frac{3}{4}$

Step 2: Draw $\frac{2}{4}$ added to $\frac{3}{4}$

Step 3: Find the total

Session 1: Modeling (I Do – Teacher Notes)

Learning Target: I will add and subtract mixed numbers with like denominators

Readiness for adding and subtracting mixed numbers with different denominators

> Kristin and her friend both had a string of licorice that was 1 foot long. After eating some, Kristin had $\frac{3}{4}$ of a foot left and her friend had $\frac{2}{4}$ of a foot left. If they combine their remaining licorice, how much do they have left altogether?

I am going to think aloud to model solving this problem.

Your job is to watch, listen, think and ask questions.

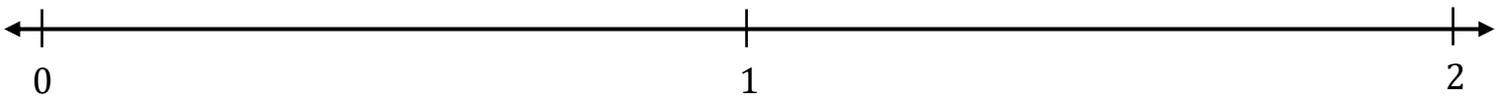| |
|---|
| **First, it is important to know what the problem is about.**

This problem is about Kristin and her friend eating string licorice. |
| **Second, I need to determine what I need to find.**

I need to find how much they have left after each of them ate some. |
| **Third, I need to determine what I know.**

I know that they each began with 1 foot of licorice. And, after they both ate some, Kristin had $\frac{3}{4}$ of a foot left and her friend had $\frac{2}{4}$ of a foot left. |
| **Fourth, I need to figure out what I can try.**

I am going to try using fraction strips and a number line to add $\frac{3}{4}$ and $\frac{2}{4}$. (Hold up a template of fraction strips and the fraction cards.)

I am going fold my fraction template to so that the "fourths" are visible as the bottom row… (Fold the template so that four-fourths are visible at the bottom.)

Since Kristin had 3 "fourths" of a foot left, I will use the fraction strips to mark off 4 fourths. (Draw 3 marks to separate the fourths and draw a fraction arrow/vector.)

To add 2 "fourths" of a foot to Kristin's, I notice that the total will go past 1 whole. (Place the left side of the template to the right of the fraction arrow/vector.)

I will need to separate the second whole into fourths so that I can figure out the total. (Draw 3 marks to separate the fourths between 1 and 2.)

Now I can draw an arrow/vector to represent 2 "fourths". (Draw the fractions arrow/vector.)

It looks like Kristin and her friend have 1 and 1 fourth feet of licorice left. |
| **Last, I need to make sure that my answer makes sense.**

I found that Kristin and her friend have 1 and 1 fourth feet of licorice left. It makes sense because I used a fraction template to represent both fractional amounts on a number line and then located the total. |

Learning Target: I will add and subtract mixed numbers with like denominators
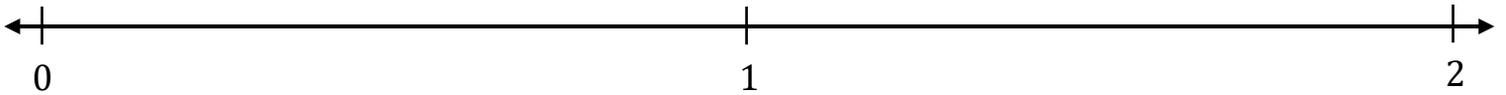
Session 1: Guided Practice (We Do)

We Do Together: (Teacher Actions)
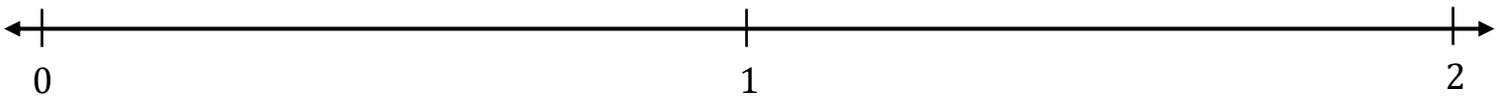
➤ Use fraction strips and number lines to add or subtract.

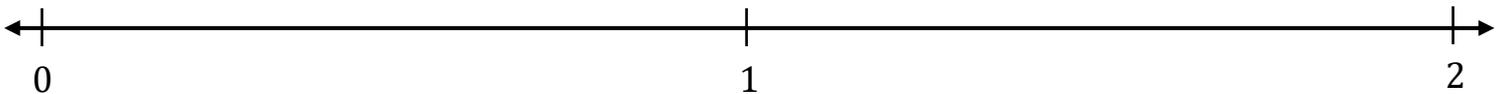**1.** $\dfrac{2}{3} + \dfrac{2}{3} =$ _____

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←———|————————————————|————————————————|——→
    0                1                2
```

2. $1\dfrac{1}{4} - \dfrac{3}{4} =$ _____

```
←———|————————————————|————————————————|——→
    0                1                2
```

3. $\dfrac{5}{8} + \dfrac{7}{8} =$ _____

```
←———|————————————————|————————————————|——→
    0                1                2
```

4. $1\dfrac{3}{6} - \dfrac{5}{6} =$ _____

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←———|————————————————|————————————————|——→
    0                1                2
```
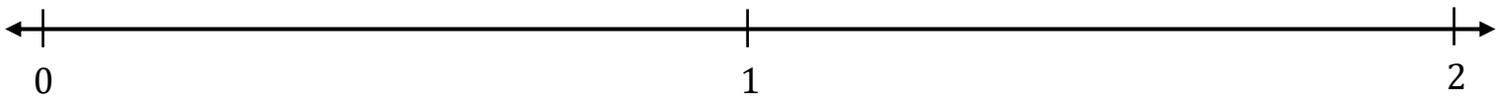
Learning Target: I will add and subtract mixed numbers with like denominators

Session 1: **Guided Practice** (We Do - Continued)
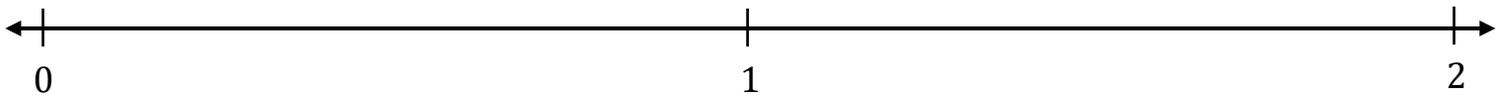
You Do Together: (As a class, or in small groups)

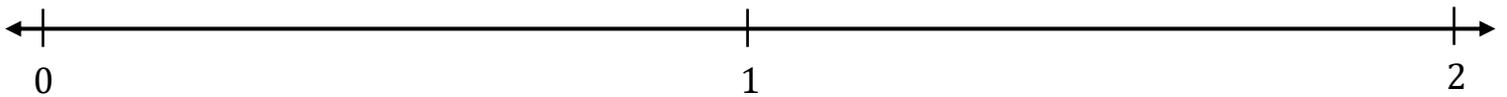➢ Students take turns leading using fraction strips and number lines to add or subtract.

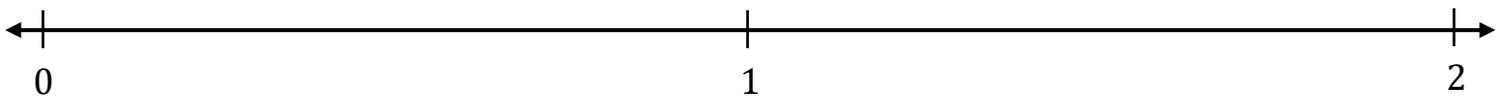**5.** $\dfrac{3}{4}$ + $\dfrac{3}{4}$ = _____

```
←+——————————————+——————————————+→
  0              1              2
```

6. $1\dfrac{2}{6}$ − $\dfrac{5}{6}$ = _____

```
←+——————————————+——————————————+→
  0              1              2
```

7. $\dfrac{6}{8}$ + $\dfrac{4}{8}$ = _____

```
←+——————————————+——————————————+→
  0              1              2
```

8. $1\dfrac{1}{3}$ − $\dfrac{2}{3}$ = _____

```
←+——————————————+——————————————+→
  0              1              2
```

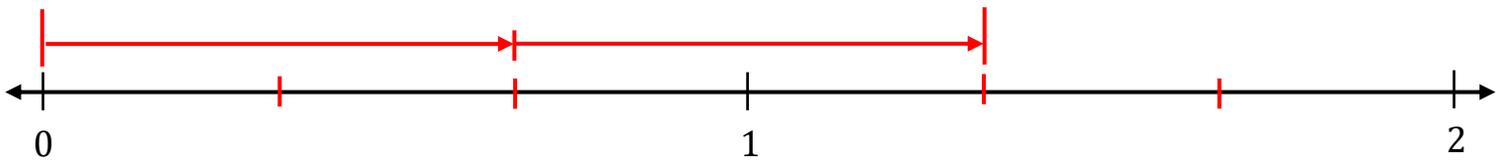**Learning Target:** I will add and subtract mixed numbers with like denominators

Session 1: Guided Practice (We Do – Teacher Notes)

We Do Together: (Teacher Actions)
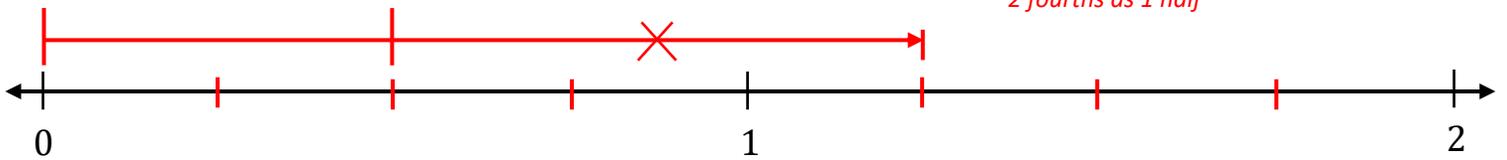
➢ Use fraction strips and number lines to add or subtract.

1. $\dfrac{2}{3}$ + $\dfrac{2}{3}$ = $\underline{\dfrac{4}{3}} = 1\dfrac{1}{3}$

- *Draw and combine the fractional parts*
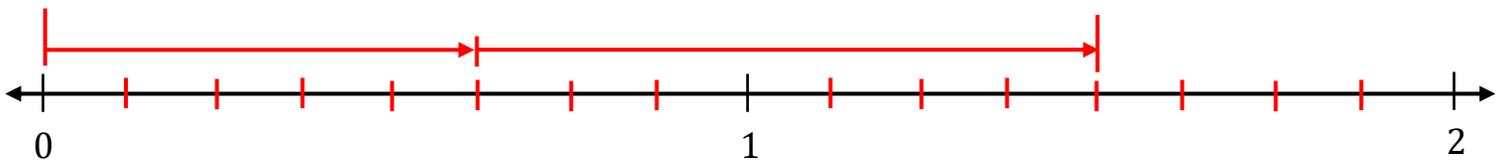- *Simplify by grouping 3 of the thirds into another whole*

2. $1\dfrac{1}{4}$ − $\dfrac{3}{4}$ = $\underline{\dfrac{2}{4}} = \dfrac{1}{2}$

- *Draw the total*
- *Ungroup the whole between 0 and 1 to make more fourths*
- *Take away 3 fourths*
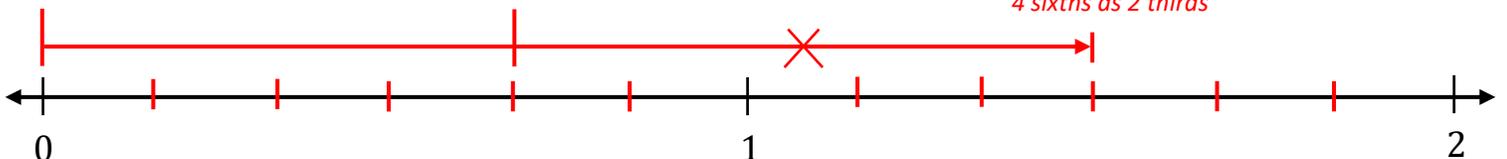- *Find how much is left and simplify 2 fourths as 1 half*

3. $\dfrac{5}{8}$ + $\dfrac{7}{8}$ = $\underline{\dfrac{12}{8}} = 1\dfrac{4}{8}$ = $1\dfrac{1}{2}$

- *Draw and combine the fractional parts*
- *Simplify by grouping 8 of the eighths into another whole*
- *Simplify 1 and 4 eighths to 1 and 1 half*

4. $1\dfrac{3}{6}$ − $\dfrac{5}{6}$ = $\underline{\dfrac{4}{6}} = \dfrac{2}{3}$

- *Draw the total*
- *Ungroup the whole between 0 and 1 to make more sixths*
- *Take away 5 sixths*
- *Find how much is left and simplify 4 sixths as 2 thirds*

Fraction Strips (4 Sets)

Directions: Each student should receive two sets of strips...do not cut into individual strips. (See example on p. 9, *fold the fraction strips twice to show fractional parts of a whole.*)

1 Whole		1 Whole	
$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$

| $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ |

| $\frac{1}{4}$ | $\frac{1}{4}$ | $\frac{1}{4}$ | $\frac{1}{4}$ | $\frac{1}{4}$ | $\frac{1}{4}$ | $\frac{1}{4}$ | $\frac{1}{4}$ |

| $\frac{1}{6}$ | $\frac{1}{6}$ | $\frac{1}{6}$ | $\frac{1}{6}$ | $\frac{1}{6}$ | $\frac{1}{6}$ | $\frac{1}{6}$ | $\frac{1}{6}$ | $\frac{1}{6}$ | $\frac{1}{6}$ | $\frac{1}{6}$ | $\frac{1}{6}$ |

| $\frac{1}{8}$ | $\frac{1}{8}$ | $\frac{1}{8}$ | $\frac{1}{8}$ | $\frac{1}{8}$ | $\frac{1}{8}$ | $\frac{1}{8}$ | $\frac{1}{8}$ | $\frac{1}{8}$ | $\frac{1}{8}$ | $\frac{1}{8}$ | $\frac{1}{8}$ | $\frac{1}{8}$ | $\frac{1}{8}$ | $\frac{1}{8}$ | $\frac{1}{8}$ |

1 Whole		1 Whole	
$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$

| $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ |

| $\frac{1}{4}$ | $\frac{1}{4}$ | $\frac{1}{4}$ | $\frac{1}{4}$ | $\frac{1}{4}$ | $\frac{1}{4}$ | $\frac{1}{4}$ | $\frac{1}{4}$ |

| $\frac{1}{6}$ | $\frac{1}{6}$ | $\frac{1}{6}$ | $\frac{1}{6}$ | $\frac{1}{6}$ | $\frac{1}{6}$ | $\frac{1}{6}$ | $\frac{1}{6}$ | $\frac{1}{6}$ | $\frac{1}{6}$ | $\frac{1}{6}$ | $\frac{1}{6}$ |

| $\frac{1}{8}$ | $\frac{1}{8}$ | $\frac{1}{8}$ | $\frac{1}{8}$ | $\frac{1}{8}$ | $\frac{1}{8}$ | $\frac{1}{8}$ | $\frac{1}{8}$ | $\frac{1}{8}$ | $\frac{1}{8}$ | $\frac{1}{8}$ | $\frac{1}{8}$ | $\frac{1}{8}$ | $\frac{1}{8}$ | $\frac{1}{8}$ | $\frac{1}{8}$ |

Session 1: Self-Reflection

Learning Target: I will add and subtract mixed numbers with like denominators

Briefly discuss student responses:

> ➢ What did I learn today about adding and subtracting mixed numbers with like denominators?

> ➢ How confident do I feel about adding and subtracting mixed numbers with like denominators on my own?
> *(Thumbs up, down, or sideways)*

Quick Check - Form A

Name_____ Date_____

Learning Target: I will add and subtract mixed numbers.

Directions: Write the answer to each problem. (Work time: 4 minutes)

1. $1\frac{2}{3}$ $+\,4\,\frac{2}{3}$ _____	**2.** $2\,\frac{5}{7}$ $+\,1\,\frac{2}{7}$ _____
3. 6 $-\,1\,\frac{3}{4}$ _____	**4.** $5\,\frac{1}{6}$ $-\,1\,\frac{4}{6}$ _____

Growth Chart

Name_____ Date_____

Learning Target: I will add and subtract mixed numbers.

Goal: 3 out of 4 correct
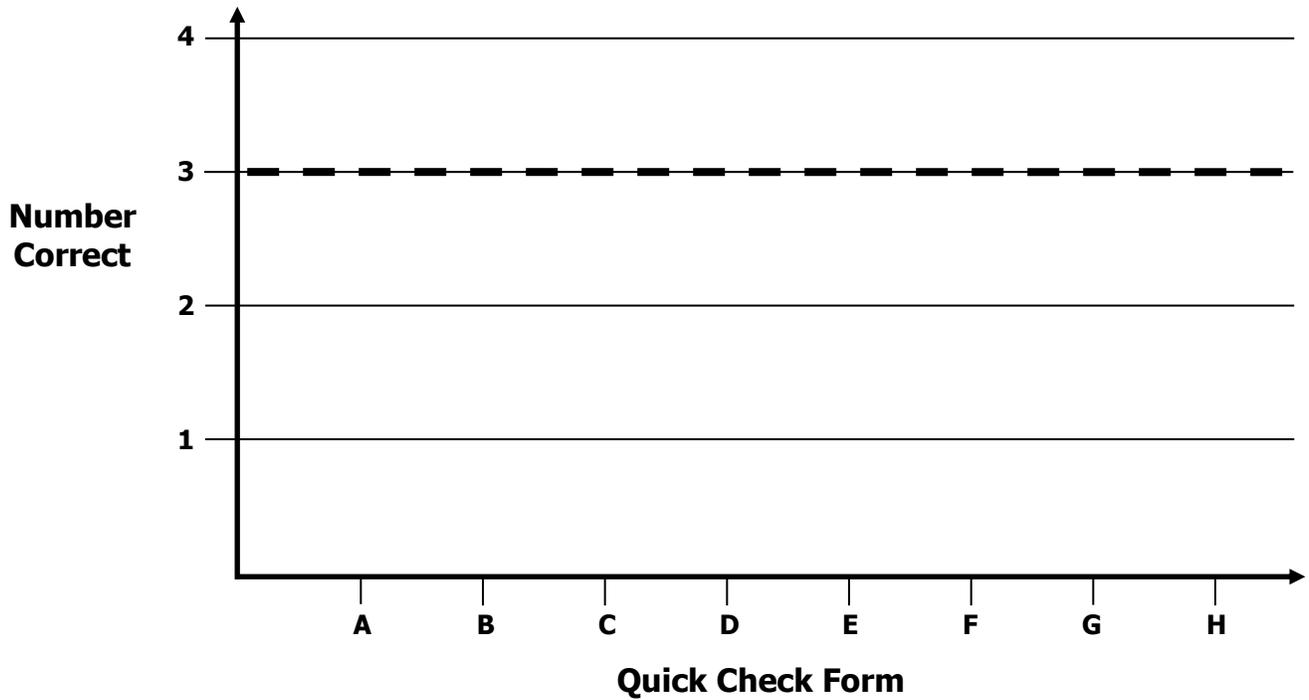
Intervention	Date	Score
Session 1:		
Session 2:		
Session 3:		
Session 4:		
Session 5:		
Session 6:		
Session 7:		
Session 8:		

Learning Target: I will add and subtract mixed numbers with like denominators
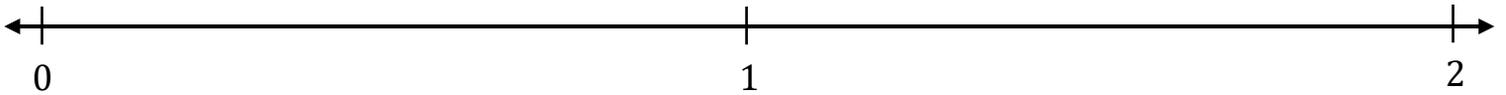
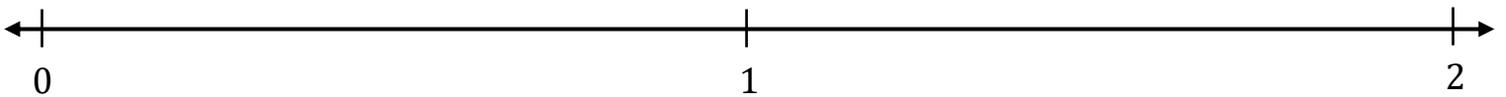# Session 2: Guided Practice (We Do)

We Do Together: (Teacher Actions)

➢ Use fraction strips and number lines to add or subtract.

1. $\dfrac{2}{4} + \dfrac{3}{4} =$ _____
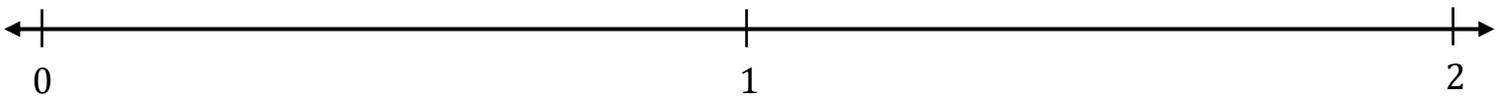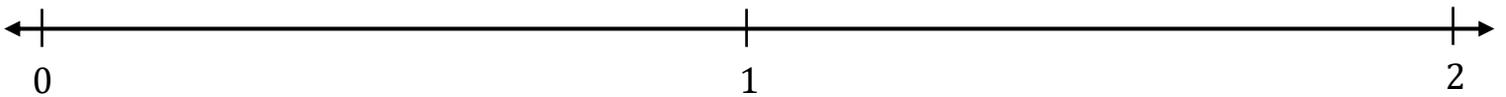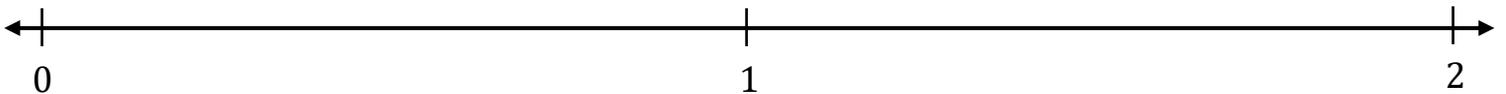
0   1   2

2. $1\dfrac{1}{6} - \dfrac{3}{6} =$ _____

0   1   2

3. $\dfrac{7}{8} + \dfrac{5}{8} =$ _____

0   1   2

4. $1\dfrac{1}{4} - \dfrac{2}{4} =$ _____

0   1   2

Learning Target: I will add and subtract mixed numbers with like denominators
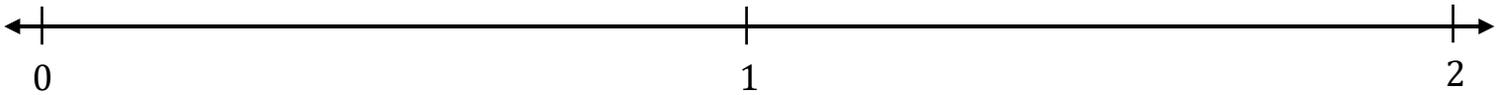
Session 2: Guided Practice (We Do - Continued)

You Do Together: (As a class, or in small groups)

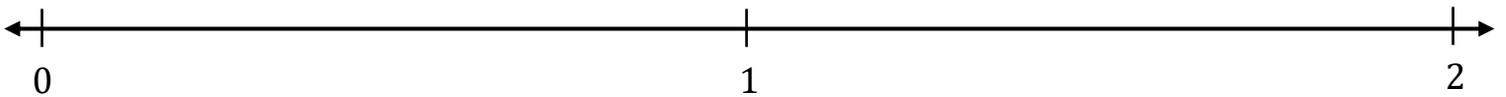➤ Students take turns leading using fraction strips and number lines to add or subtract.

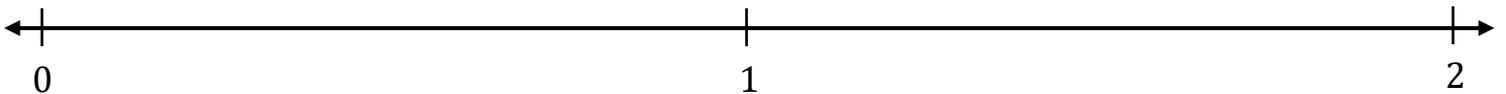**5.** $\dfrac{3}{4}$ + $\dfrac{3}{4}$ = _____

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 ◄──┼──────────────────────────┼──────────────────────────┼──►
    0                          1                          2
```

6. $1\dfrac{1}{3}$ – $\dfrac{2}{3}$ = _____

```
 ◄──┼──────────────────────────┼──────────────────────────┼──►
    0                          1                          2
```

7. $\dfrac{5}{8}$ + $\dfrac{6}{8}$ = _____

```
 ◄──┼──────────────────────────┼──────────────────────────┼──►
    0                          1                          2
```

8. $1\dfrac{1}{6}$ – $\dfrac{4}{6}$ = _____

```
 ◄──┼──────────────────────────┼──────────────────────────┼──►
    0                          1                          2
```

Session 2: Self-Reflection

Learning Target: I will add and subtract mixed numbers with like denominators

Briefly discuss student responses:

➢ What did I learn today about adding and subtracting mixed numbers with like denominators?

➢ How confident do I feel about adding and subtracting mixed numbers with like denominators on my own?
(Thumbs up, down, or sideways)

DELTA MATH – RtI PROGRAM

Name_____ Date_____

Learning Target: I will add and subtract mixed numbers.

Directions: Write the answer to each problem. (Work time: 4 minutes)

1.

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

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

_____

2.

$$2 \frac{5}{6}$$

$$+ 4 \frac{2}{6}$$

_____

3.

$$5$$

$$- 2 \frac{1}{3}$$

_____

4.

$$6 \frac{1}{4}$$

$$- 2 \frac{3}{4}$$

_____

Learning Target: I will add and subtract mixed numbers with like denominators

Readiness for adding and subtracting mixed numbers with different denominators

Lori is preparing for a running race. As part of her practice schedule, she ran $1\frac{2}{4}$ miles on the first day of practice and $1\frac{3}{4}$ miles on the second day. How far did she run during her first two days of practice?
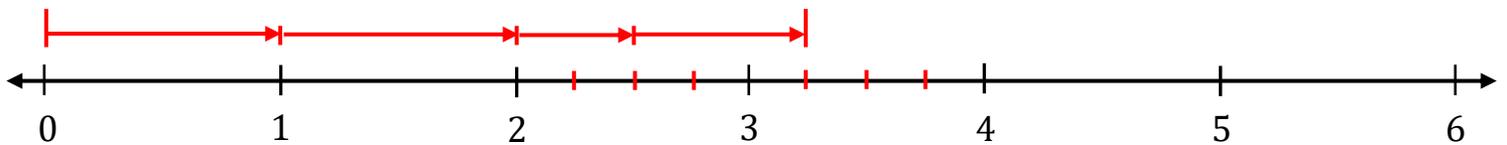
```
|——+————————+————————+————————+————————+————————+——>
0        1        2        3        4        5        6
```

Learning Target: I will add and subtract mixed numbers with like denominators

Readiness for adding and subtracting mixed numbers with different denominators

Lori is preparing for a running race. As part of her practice schedule, she ran $1\frac{2}{4}$ miles on the first day of practice and $1\frac{3}{4}$ miles on the second day. How far did she run during her first two days of practice?

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

Learning Target: I will add and subtract mixed numbers with like denominators

Readiness for adding and subtracting mixed numbers with different denominators

> Lori is preparing for a running race. As part of her practice schedule, she ran $1\frac{2}{4}$ miles on the first day of practice and $1\frac{3}{4}$ miles on the second day. How far did she run during her first two days of practice?

I am going to think aloud to model solving this problem.

Your job is to watch, listen, think and ask questions.

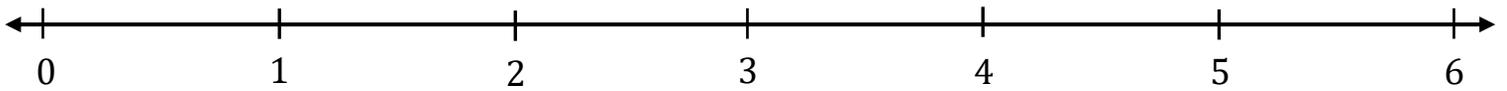| |
|---|
| **First, it is important to know what the problem is about.**
This problem is about Lori preparing for a race. |
| **Second, I need to determine what I need to find.**
I need to find how far she ran during two days of practice. |
| **Third, I need to determine what I know.**
I know that Lori ran 1 and 2-fourths of a mile on the first day and 1 and 3-fourths of a mile on the second. |
| **Fourth, I need to figure out what I can try.**

I am going to try drawing both mixed numbers on a number line to add them together.
(Write the addition problem above the number line.) $1\frac{2}{4} + 1\frac{3}{4} = 3\frac{1}{4}$
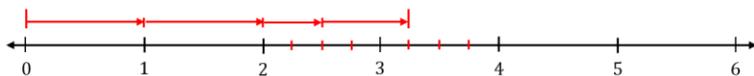
To make this addition drawing, I am going to draw the whole numbers first and the fractional parts second.
(Point to the whole numbers and then the fractional parts.)

To add the whole numbers, I simply need to model one plus one on the number line.
(Count 1 whole and draw a vertical mark above the number line, then the first arrow from 0 to 1. Count another whole and draw a vertical mark above the number line, then the second arrow from 1 to 2.)

To add the fractional parts, I need to separate the next whole numbers on the number line into fourths.
(Draw 3 marks on the number line to separate the whole between 2 and 3 into fourths.)

To draw 2 "fourths" of a whole, I will draw an arrow that is 2 fourths of the whole from 2 to 3.
(Count 2 fourths and draw a vertical mark above the number line, then the arrow.)

I don't have enough fourths identified to draw 3 fourths, so I will need to separate another whole into fourths.
(Draw 3 marks to separate the whole between 3 and 4 into fourths.)

Now I can draw 3 more "fourths" to see that Lori ran 3 and 1 fourth miles.
(Count 3 fourths and draw a longer vertical mark above the number line, then the arrow between 2 and 2 fourths and 3 and 1 fourth.) |
| **Last, I need to make sure that my answer makes sense.**

I found that Lori ran 3 and 1 fourth miles during her first two days of practice. It makes sense because I drew both mixed numbers on a number line to see that 2 whole numbers and 5 fourths is the same as 3 wholes and 1 fourth. |

Learning Target: I will add and subtract mixed numbers with like denominators

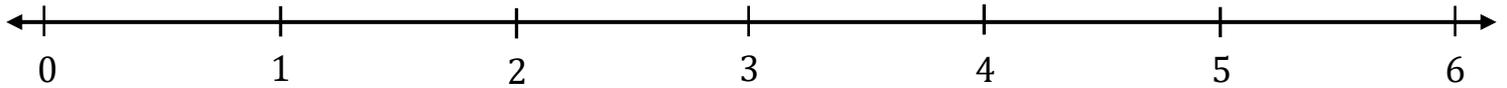# Session 3: Guided Practice (We Do)

We Do Together: (Teacher Actions)
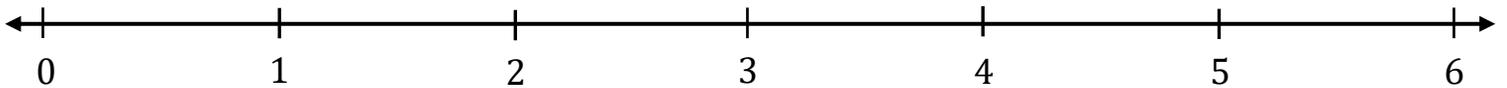
➢ Use number lines to add or subtract the mixed numbers.
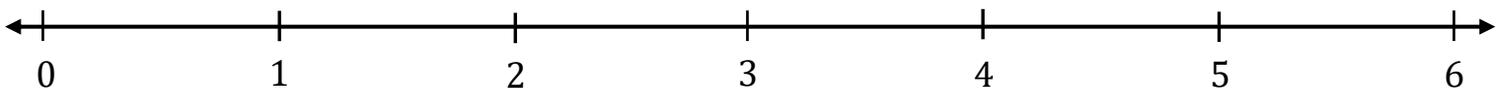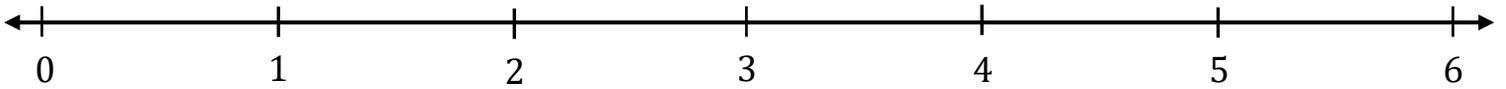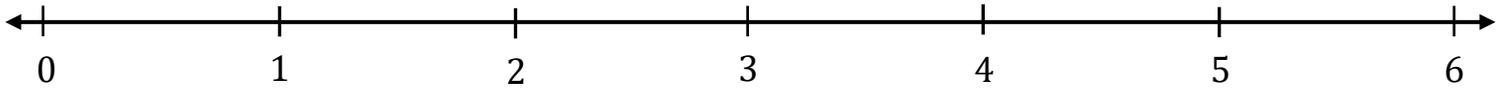
1. $1\frac{2}{3} + 2\frac{2}{3} = $ _____

```
<──┼────────┼────────┼────────┼────────┼────────┼────────┼──>
   0        1        2        3        4        5        6
```

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

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<──┼────────┼────────┼────────┼────────┼────────┼────────┼──>
   0        1        2        3        4        5        6
```

3. $2\frac{5}{8} + 1\frac{7}{8} = $ _____

```
<──┼────────┼────────┼────────┼────────┼────────┼────────┼──>
   0        1        2        3        4        5        6
```

4. $5\frac{3}{6} - 2\frac{5}{6} = $ _____

```
<──┼────────┼────────┼────────┼────────┼────────┼────────┼──>
   0        1        2        3        4        5        6
```

DELTA MATH

Learning Target: I will add and subtract mixed numbers with like denominators

Session 3: Guided Practice (We Do - Continued)

You Do Together: (Teacher Actions)

➤ Students take turns leading using number lines to add or subtract the mixed numbers.
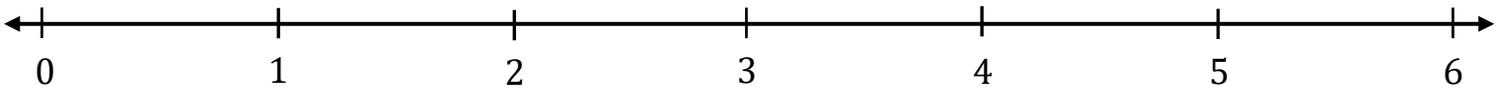
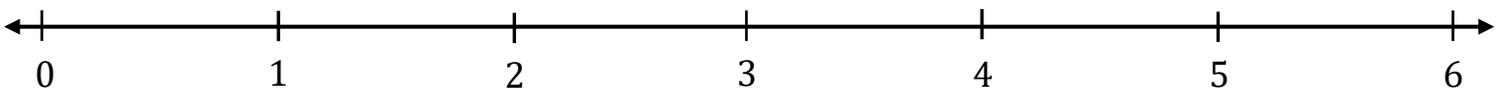**5.** $1\frac{2}{3}$ + $3\frac{1}{3}$ = _____

6. $5\frac{2}{4}$ – $1\frac{3}{4}$ = _____

7. $1\frac{4}{8}$ + $3\frac{6}{8}$ = _____

8. $3\frac{2}{6}$ – $1\frac{3}{6}$ = _____

Learning Target: I will add and subtract mixed numbers with like denominators

Session 3: Guided Practice (We Do – Teacher Notes)

We Do Together: (Teacher Actions)

➢ Use number lines to add or subtract the mixed numbers.

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

- *Draw and combine the wholes*
- *Draw and combine the fractional parts*
- *Simplify by grouping 3 of the thirds into another whole*
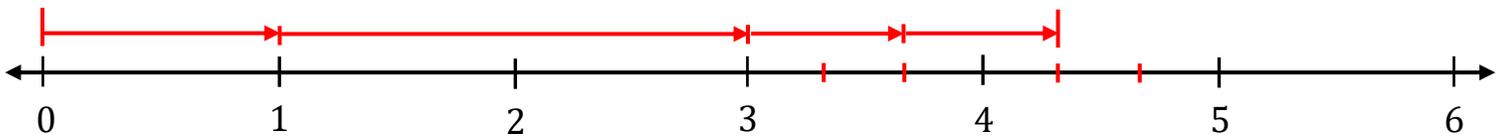
2. $4\frac{1}{4}$ – $1\frac{3}{4}$ = _____ $2\frac{2}{4}$ = $2\frac{1}{2}$

- *Draw the total*
- *Ungroup the whole between 3 and 4 to make more fourths*
- *Take away 3 fourths, then 1 whole*
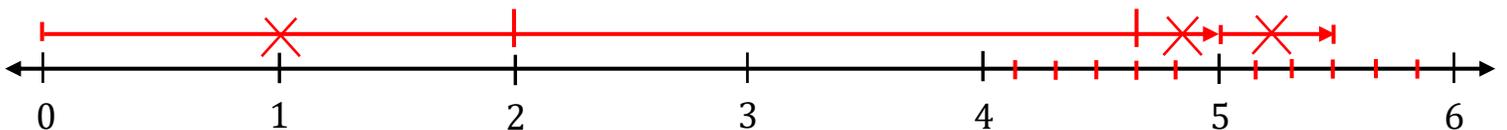- *Find how much is left and simplify 2 fourths as 1 half*
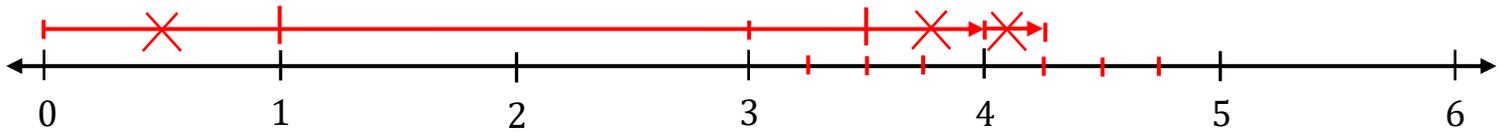
3. $2\frac{5}{8}$ + $1\frac{7}{8}$ = _____ $3\frac{12}{8}$ = $4\frac{4}{8}$ = $4\frac{1}{2}$

- *Draw and combine the wholes*
- *Draw and combine the fractional parts*
- *Simplify by grouping 8 of the eighths into another whole*
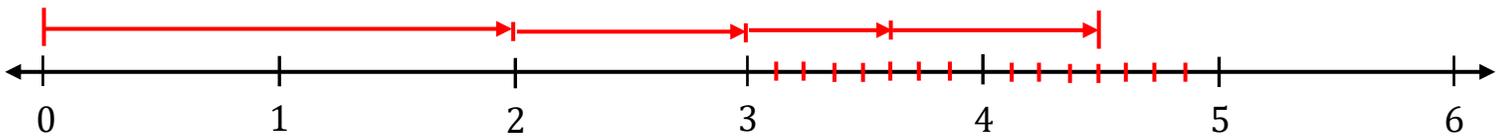
4. $5\frac{3}{6}$ – $2\frac{5}{6}$ = _____ $2\frac{4}{6}$ = $2\frac{2}{3}$

- *Draw the total*
- *Ungroup the whole between 4 and 5 to make more sixths*
- *Take away 5 sixths, then 2 wholes*
- *Find how much is left and simplify 4 sixths as 2 thirds*

Session 3: Self-Reflection

Learning Target: I will add and subtract mixed numbers with like denominators

Briefly discuss student responses:

➢ What did I learn today about adding and subtracting mixed numbers with like denominators?

➢ How confident do I feel about adding and subtracting mixed numbers with like denominators on my own?
(Thumbs up, down, or sideways)

DELTA MATH
— RtI PROGRAM —

Name_____ Date_____

Learning Target: I will add and subtract mixed numbers.

Directions: Write the answer to each problem. (Work time: 4 minutes)

1. $$1\frac{3}{4}$$ $$+\,5\frac{3}{4}$$ _____	**2.** $$3\frac{5}{8}$$ $$+\,1\frac{3}{8}$$ _____
3. $$7$$ $$-\,1\frac{3}{5}$$ _____	**4.** $$5\frac{3}{6}$$ $$-\,1\frac{4}{6}$$ _____

DELTA MATH

Learning Target: I will add and subtract mixed numbers with like denominators

Session 4: Guided Practice (We Do)

We Do Together: (Teacher Actions)
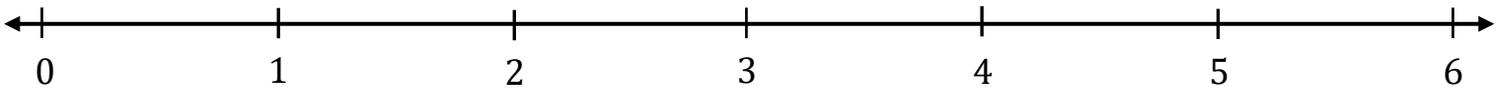
➤ Use number lines to add or subtract the mixed numbers.

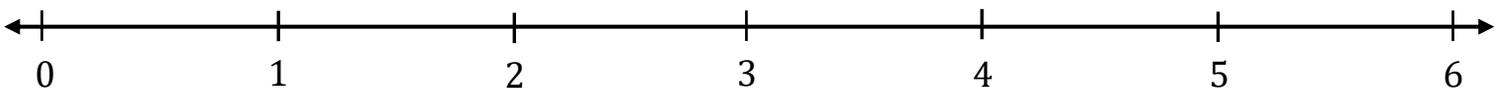**1.** $1\frac{2}{3}$ + $2\frac{1}{3}$ = _____

```
+—————+—————+—————+—————+—————+—————→
0     1     2     3     4     5     6
```

2. $2\frac{1}{4}$ – $1\frac{3}{4}$ = _____

```
+—————+—————+—————+—————+—————+—————→
0     1     2     3     4     5     6
```

3. $2\frac{3}{8}$ + $2\frac{7}{8}$ = _____

```
+—————+—————+—————+—————+—————+—————→
0     1     2     3     4     5     6
```

4. $4\frac{1}{6}$ – $2\frac{5}{6}$ = _____

```
+—————+—————+—————+—————+—————+—————→
0     1     2     3     4     5     6
```
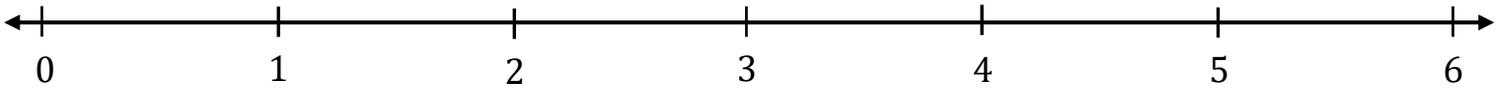
Learning Target: I will add and subtract mixed numbers with like denominators

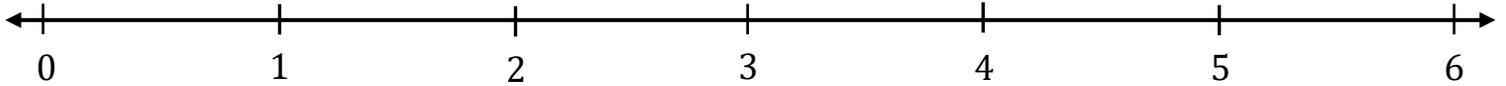# Session 4: Guided Practice (We Do - Continued)

You Do Together: (Teacher Actions)

> Students take turns leading using number lines to add or subtract the mixed numbers.
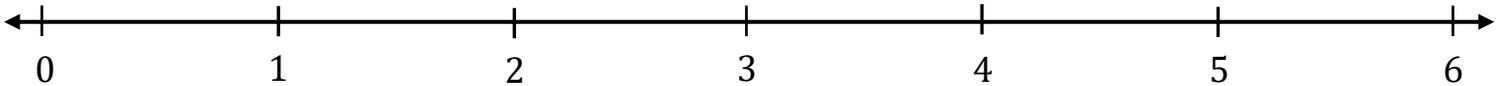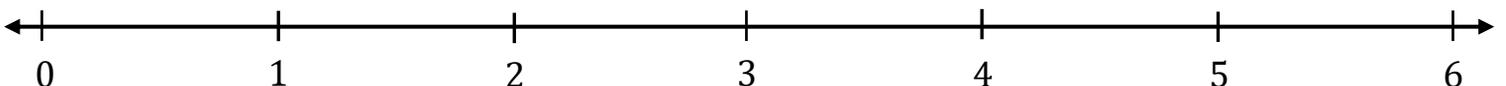
5. $1\frac{2}{3}$ + $2\frac{1}{3}$ = _____

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

7. $1\frac{5}{8}$ + $2\frac{6}{8}$ = _____

8. $5\frac{2}{6}$ – $1\frac{4}{6}$ = _____

Session 4: Self-Reflection

Learning Target: I will add and subtract mixed numbers with like denominators

Briefly discuss student responses:

➢ What did I learn today about adding and subtracting mixed numbers with like denominators?

➢ How confident do I feel about adding and subtracting mixed numbers with like denominators on my own?
(Thumbs up, down, or sideways)

Quick Check - Form D

Name_____ Date_____

Learning Target: I will add and subtract mixed numbers.

Directions: Write the answer to each problem. (Work time: 4 minutes)

1.

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

$$+\ 4\frac{1}{3}$$
_____

2.

$$2\frac{5}{7}$$

$$+\ 1\frac{4}{7}$$
_____

3.

$$6$$

$$-\ 3\frac{1}{4}$$
_____

4.

$$5\frac{3}{8}$$

$$-\ 1\frac{5}{8}$$
_____

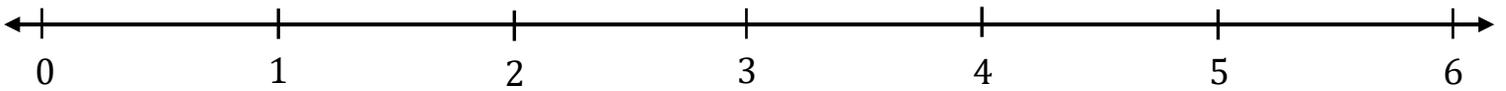**Learning Target:** I will add and subtract mixed numbers with like denominators
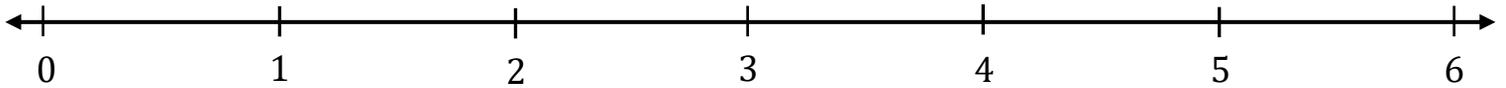
Session 5: Guided Practice (We Do)

We Do Together: (Teacher Actions)
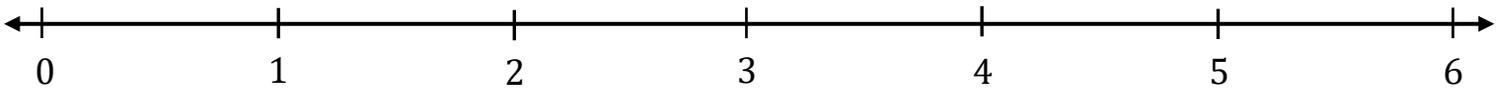
➤ Use number lines to add or subtract the mixed numbers.
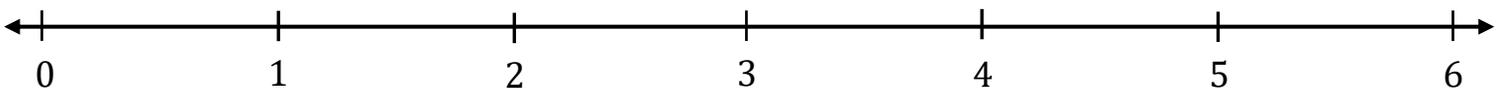
1. $1\frac{1}{3} + 2\frac{1}{3} =$ _____

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

3. $2\frac{5}{8} + 1\frac{3}{8} =$ _____
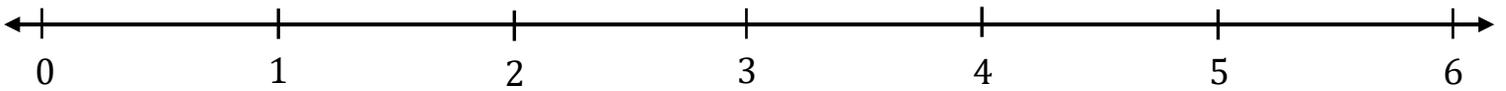

4. $5\frac{2}{6} - 2\frac{5}{6} =$ _____

Learning Target: I will add and subtract mixed numbers with like denominators

Session 5: Guided Practice (We Do - Continued)

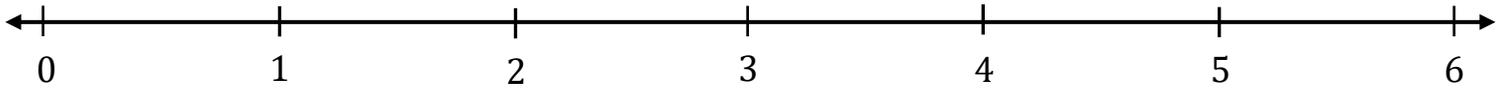**You Do Together:** (Teacher Actions)

➢ Students take turns leading using number lines to add or subtract the mixed numbers.

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

```
+——+——+——+——+——+——+→
0    1    2    3    4    5    6
```

6. $4\frac{1}{4}$ – $1\frac{3}{4}$ = _____

```
+——+——+——+——+——+——+→
0    1    2    3    4    5    6
```

7. $1\frac{2}{8}$ + $3\frac{6}{8}$ = _____

```
+——+——+——+——+——+——+→
0    1    2    3    4    5    6
```
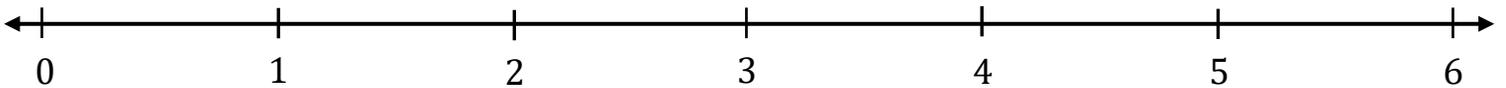
8. $5\frac{3}{6}$ – $1\frac{5}{6}$ = _____

```
+——+——+——+——+——+——+→
0    1    2    3    4    5    6
```
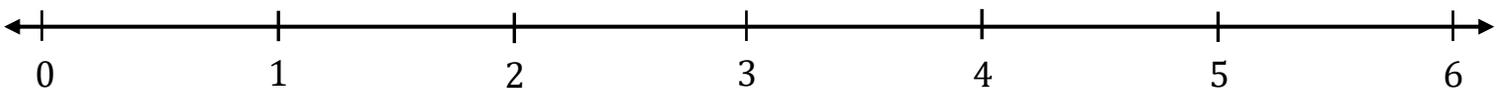
Session 5: Self-Reflection

Learning Target: I will add and subtract mixed numbers with like denominators

Briefly discuss student responses:

➢ What did I learn today about adding and subtracting mixed numbers with like denominators?

➢ How confident do I feel about adding and subtracting mixed numbers with like denominators on my own?
(Thumbs up, down, or sideways)

Quick Check - Form E

Name_____ Date_____

Learning Target: I will add and subtract mixed numbers.

Directions: Write the answer to each problem. (Work time: 4 minutes)

1. $1\frac{2}{3}$ $+\,4\frac{2}{3}$ _____	**2.** $2\frac{5}{7}$ $+\,1\frac{2}{7}$ _____
3. 6 $-\,1\frac{3}{4}$ _____	**4.** $5\frac{1}{6}$ $-\,1\frac{4}{6}$ _____

Session 6: Modeling (I Do)

Learning Target: I will add and subtract mixed numbers with like denominators

Readiness for adding and subtracting mixed numbers with different denominators

Lauren was making bracelets out of ribbon for her daughter's birthday party. She began with $3\frac{1}{4}$ feet of ribbon and used $1\frac{3}{4}$ feet to make the bracelets. How many feet of ribbon does she have left?

Learning Target: I will add and subtract mixed numbers with like denominators

Readiness for adding and subtracting mixed numbers with different denominators

Lauren was making bracelets out of ribbon for her daughter's birthday party. She began with $3\frac{1}{4}$ feet of ribbon and used $1\frac{3}{4}$ feet to make the bracelets. How many feet of ribbon does she have left?

Feet of Ribbon

$$2\ \frac{5}{4}$$

$$\cancel{3}\ \cancel{\frac{1}{4}}$$

$$-\ \ 1\ \frac{3}{4}$$

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

2 x 1

2 x 2

Learning Target: I will add and subtract mixed numbers with like denominators

Readiness for adding and subtracting mixed numbers with different denominators

> Lauren was making bracelets out of ribbon for her daughter's birthday party. She began with $3\frac{1}{4}$ feet of ribbon and used $1\frac{3}{4}$ feet to make the bracelets. How many feet of ribbon does she have left?

I am going to think aloud to model solving this problem.

Your job is to watch, listen, think and ask questions.

First, it is important to know what the problem is about.

This problem is about Lauren making bracelets out of ribbon for her daughter's birthday party.

Second, I need to determine what I need to find.

I need to find how much ribbon she has left.

Third, I need to determine what I know.

I know that she began with 3 and 1 fourth feet of ribbon and used 1 and 3 fourths to make the bracelets.

Fourth, I need to figure out what I can try.

Feet of Ribbon

I am going to try using my understanding of whole numbers and fractional parts to subtract 1 and 3 fourths from 3 and 1 fourth.
(Write the label and subtraction problem.)

$2\frac{5}{4}$

Since I am subtracting 3 fourths and I currently only have 1 fourth, I will need to ungroup one of my wholes into 4 more fourths.
(Point to the fractional parts of each mixed number.)

$\cancel{3}\cancel{\frac{1}{4}}$

If I ungroup one of my 3 wholes, I am left with 2 wholes.
(Cross off the 3 and write the whole number "2" above it.)

$-\ 1\frac{3}{4}$

One whole ungroups into 4 fourths, so I now have 5 fourths in the fractional part.
(Cross off the 1 fourth and write 5 fourths above it.)

$1\frac{2}{4} = 1\frac{1}{2}$ ⟋2 x 1 ⟍2 x 2

Now that I rewrote 3 and 1 fourth as an equivalent 2 and 5 fourths, I can subtract the "like" values. 2 wholes minus 1 whole is equal to 1 whole.
(Write the whole number 1 under the subtraction line.)

And, 5 fourths minus 3 fourths is equal to 2 fourths.
(Write the fractional part 2 fourths under the subtraction line.)

Lauren has 1 and 2 fourths feet of ribbon left which can be simplified as 1 and 1 half, since the numerator and denominator have a common factor of 2.
(Write $= 1\frac{1}{2}$ next to the answer)

I can figure this out because 2 times 1 equals 2 and 2 times 2 equals 4, then 2 fourths is equal to 1 half

---

Last, I need to make sure that my answer makes sense.

I found that Lauren had 1 and 1 half feet of ribbon left. It makes sense because ungrouped a whole to make enough fourths, then I subtracted the whole and fourths separately to find what was left.

Learning Target: I will add and subtract mixed numbers with like denominators

Session 6: Guided Practice (We Do)

We Do Together: (Teacher Actions)

➢ Use your understanding of whole numbers and fractional parts to add or subtract.

1. $$1\,\frac{3}{5}$$ $$+\,2\,\frac{3}{5}$$ _____	**2.** $$4\,\frac{5}{6}$$ $$+\,1\,\frac{3}{6}$$ _____
3. $$6$$ $$-\,2\,\frac{3}{4}$$ _____	**4.** $$4\,\frac{3}{8}$$ $$-\,1\,\frac{5}{8}$$ _____

Learning Target: I will add and subtract mixed numbers with like denominators

Session 6: Guided Practice (We Do - Continued)

You Do Together: (As a class, or in small groups)

> ➤ Take turns leading to use your understanding of whole numbers and fractional parts to add or subtract.

5. $$4 \frac{3}{7}$$ $$+ \, 2 \frac{3}{7}$$ _____	**6.** $$5 \frac{2}{4}$$ $$+ \, 2 \frac{3}{4}$$ _____
7. $$8$$ $$- \, 3 \frac{2}{5}$$ _____	**8.** $$5 \frac{2}{6}$$ $$- \, 3 \frac{5}{6}$$ _____

Learning Target: I will add and subtract mixed numbers with like denominators

Session 6: Guided Practice (We Do – Teacher Notes)

We Do Together: (Teacher Actions)

➢ Use your understanding of whole numbers and fractional parts to add or subtract.

1.

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

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

$$3 \frac{6}{5} \ = \ 3 + 1 + \frac{1}{5} \ = \ 4 \frac{1}{5}$$

$$\frac{5}{5} \quad \frac{1}{5}$$

2.

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

$$+ 1 \frac{3}{6}$$

$$5 \frac{8}{6} \ = \ 5 + 1 + \frac{2}{6} \ = \ 6 \frac{1}{3}$$

2 x 1

2 x 3

$$\frac{6}{6} \quad \frac{2}{6}$$

3.

$$5 \frac{4}{4}$$

$$\cancel{6}$$

$$- 2 \frac{3}{4}$$

$$3 \frac{1}{4}$$

4.

$$2 \frac{11}{8}$$

$$\cancel{4 \frac{3}{8}}$$

$$- 1 \frac{5}{8}$$

2 x 3

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

2 x 4

Session 6: Self-Reflection

Learning Target: I will add and subtract mixed numbers with like denominators

Briefly discuss student responses:

➢ What did I learn today about adding and subtracting mixed numbers with like denominators?

➢ How confident do I feel about adding and subtracting mixed numbers with like denominators on my own?
(Thumbs up, down, or sideways)

Name_____ Date_____

Learning Target: I will add and subtract mixed numbers.

Directions: Write the answer to each problem. (Work time: 4 minutes)

1.

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

2.

$$2\frac{5}{6}$$
$$+\ 4\frac{2}{6}$$
$$\overline{}$$

3.

$$5$$
$$-\ 2\frac{1}{3}$$
$$\overline{}$$

4.

$$6\frac{1}{4}$$
$$-\ 2\frac{3}{4}$$
$$\overline{}$$

Learning Target: I will add and subtract mixed numbers with like denominators

Session 7: Guided Practice (We Do)

We Do Together: (Teacher Actions)

➤ Use your understanding of whole numbers and fractional parts to add or subtract.

1. $$1\frac{3}{5}$$ $$+\ 2\frac{4}{5}$$ $$\overline{\hspace{3cm}}$$	**2.** $$4\frac{5}{6}$$ $$+\ 2\frac{1}{6}$$ $$\overline{\hspace{3cm}}$$
3. $$6$$ $$-\ 2\frac{1}{4}$$ $$\overline{\hspace{3cm}}$$	**4.** $$4\frac{3}{8}$$ $$-\ 2\frac{7}{8}$$ $$\overline{\hspace{3cm}}$$

DELTA MATH
— RtI PROGRAM

Name _____ Date _____

Learning Target: I will add and subtract mixed numbers with like denominators

Session 7: Guided Practice (We Do - Continued)

You Do Together: (As a class, or in small groups)

➢ Take turns leading to use your understanding of whole numbers and fractional parts to add or subtract.

5. $$3\ \frac{4}{7}$$ $$+\ 2\ \frac{3}{7}$$ _____	**6.** $$2\ \frac{3}{4}$$ $$+\ 3\ \frac{3}{4}$$ _____
7. $$6$$ $$-\ 2\ \frac{3}{5}$$ _____	**8.** $$4\ \frac{2}{6}$$ $$-\ 3\ \frac{5}{6}$$ _____

Session 7: Self-Reflection

Learning Target: I will add and subtract mixed numbers with like denominators

Briefly discuss student responses:

> ➢ What did I learn today about adding and subtracting mixed numbers with like denominators?

> ➢ How confident do I feel about adding and subtracting mixed numbers with like denominators on my own?
> *(Thumbs up, down, or sideways)*

Quick Check - Form G

Name_____ Date_____

Learning Target: I will add and subtract mixed numbers.

Directions: Write the answer to each problem. (Work time: 4 minutes)

1. $$1\frac{3}{4}$$ $$+\,5\,\frac{3}{4}$$ _____	**2.** $$3\,\frac{5}{8}$$ $$+\,1\,\frac{3}{8}$$ _____
3. $$7$$ $$-\,1\,\frac{3}{5}$$ _____	**4.** $$5\,\frac{3}{6}$$ $$-\,1\,\frac{4}{6}$$ _____

Learning Target: I will add and subtract mixed numbers with like denominators

Session 8: Guided Practice (We Do)

We Do Together: (Teacher Actions)

  ➢ Use your understanding of whole numbers and fractional parts to add or subtract.

1.	2.
$$6 \frac{2}{5}$$ $$+ \ 2 \frac{3}{5}$$	$$4 \frac{5}{6}$$ $$+ \ 3 \frac{4}{6}$$
3.	4.
$$7$$ $$- \ 1 \frac{3}{4}$$	$$5 \frac{1}{8}$$ $$- \ 1 \frac{5}{8}$$

Learning Target: I will add and subtract mixed numbers with like denominators

Session 8: **Guided Practice** (We Do - Continued)

You Do Together: (As a class, or in small groups)

➤ Take turns leading to use your understanding of whole numbers and fractional parts to add or subtract.

5. $$4\ \frac{3}{7}$$ $$+\ 2\ \frac{6}{7}$$ _____	**6.** $$6\ \frac{1}{4}$$ $$+\ 3\ \frac{3}{4}$$ _____
7. $$9$$ $$-\ 3\ \frac{2}{5}$$ _____	**8.** $$5\ \frac{3}{9}$$ $$-\ 1\ \frac{5}{9}$$ _____

Session 8: Self-Reflection

Learning Target: I will add and subtract mixed numbers with like denominators

Briefly discuss student responses:

➢ What did I learn today about adding and subtracting mixed numbers with like denominators?

➢ How confident do I feel about adding and subtracting mixed numbers with like denominators on my own?
(Thumbs up, down, or sideways)

Quick Check - Form H

Name_____ Date_____

Learning Target: I will add and subtract mixed numbers.

Directions: Write the answer to each problem. (Work time: 4 minutes)

1.	2.
$1\dfrac{2}{3}$ $+\,4\,\dfrac{1}{3}$ _____	$2\,\dfrac{5}{7}$ $+\,1\,\dfrac{4}{7}$ _____
3.	4.
6 $-\,3\,\dfrac{1}{4}$ _____	$5\,\dfrac{3}{8}$ $-\,1\,\dfrac{5}{8}$ _____

Independent Practice (You Do)

Learning Target: I will add and subtract mixed numbers with like denominators

Readiness for adding and subtracting mixed numbers with different denominators

Title of Game: Play "**Addition/Subtraction Match-up**!"

Number of Players: 2

Objective: To match your answer cards to unknown problem cards.

Materials:

➢ 1 set of **Problem** and **Answer** cards per group

➢ 1 recording sheet per player

Set-up:

➢ Deal all 10 **Problem** cards face down in a row.

➢ Deal 5 **Answer** cards face up to each player.

Directions:

➢ **Player 1** goes first
  o Take a card from the row of face down **Problem** cards and turn it face up
  o Write the problem on the recording sheet
  o And, find the answer in simplest form

➢ If **Player 1** has the **Answer** card, place it face up on top of the **Problem** card, take both cards and say:

"The answer to ____ is equal to ____."

➢ If **Player 1** does not have the answer to the **Problem** card, turn the **Problem** card back over.

➢ **Players 1 and 2** alternate turns. The **winner** is the first player to match all 5 of their cards.

Learning Target: I will add and subtract mixed numbers with like denominators

Independent Practice: Addition/Subtraction Match-up!
(Recording Sheet)

Problem Cards (Set A)

$6 \ \frac{1}{4}$ $+ \ 2 \ \frac{2}{4}$ ___ Set A	$6 \ \frac{2}{4}$ $+ \ 2 \ \frac{3}{4}$ ___ Set A	$5 \ \frac{3}{4}$ $+ \ 2 \ \frac{2}{4}$ ___ Set A	$5 \ \frac{1}{4}$ $+ \ 2 \ \frac{3}{4}$ ___ Set A	5 $- \ 2 \ \frac{3}{4}$ ___ Set A
$6 \ \frac{1}{4}$ $- \ 2 \ \frac{2}{4}$ ___ Set A	$5 \ \frac{2}{4}$ $- \ 2 \ \frac{3}{4}$ ___ Set A	$5 \ \frac{3}{4}$ $- \ 2 \ \frac{2}{4}$ ___ Set A	$6 \ \frac{1}{4}$ $- \ 2 \ \frac{3}{4}$ ___ Set A	5 $- \ 2 \ \frac{3}{4}$ ___ Set A
$6 \ \frac{1}{4}$ $+ \ 2 \ \frac{2}{4}$ ___ Set A	$6 \ \frac{2}{4}$ $+ \ 2 \ \frac{3}{4}$ ___ Set A	$5 \ \frac{3}{4}$ $+ \ 2 \ \frac{2}{4}$ ___ Set A	$5 \ \frac{1}{4}$ $+ \ 2 \ \frac{3}{4}$ ___ Set A	5 $- \ 2 \ \frac{3}{4}$ ___ Set A
$6 \ \frac{1}{4}$ $- \ 2 \ \frac{2}{4}$ ___ Set A	$5 \ \frac{2}{4}$ $- \ 2 \ \frac{3}{4}$ ___ Set A	$5 \ \frac{3}{4}$ $- \ 2 \ \frac{2}{4}$ ___ Set A	$6 \ \frac{1}{4}$ $- \ 2 \ \frac{3}{4}$ ___ Set A	5 $- \ 2 \ \frac{3}{4}$ ___ Set A

Set A₁ (first two rows), Set A₂ (last two rows)

Answer Cards (Set A)

Storage Suggestions: Copy the **Problem (Set A)** cards and **Answer (Set A)** cards in two different colors.
Store 1 set of each in a sealable bag for each pair of students.

Set A₁		Set A₂	
$8\dfrac{3}{4}$ Set A	$3\dfrac{3}{4}$ Set A	$8\dfrac{3}{4}$ Set A	$3\dfrac{3}{4}$ Set A
$9\dfrac{1}{4}$ Set A	$2\dfrac{3}{4}$ Set A	$9\dfrac{1}{4}$ Set A	$2\dfrac{3}{4}$ Set A
$8\dfrac{1}{4}$ Set A	$3\dfrac{1}{4}$ Set A	$8\dfrac{1}{4}$ Set A	$3\dfrac{1}{4}$ Set A
8 Set A	$3\dfrac{1}{2}$ Set A	8 Set A	$3\dfrac{1}{2}$ Set A
$2\dfrac{1}{4}$ Set A	$2\dfrac{1}{4}$ Set A	$2\dfrac{1}{4}$ Set A	$2\dfrac{1}{4}$ Set A

Problem Cards (Set B)

Set B₁

$$5 \ \frac{1}{8}$$
$$+ \ 2 \ \frac{5}{8}$$

Set B

$$4 \ \frac{3}{8}$$
$$+ \ 2 \ \frac{5}{8}$$

Set B

$$4 \ \frac{7}{8}$$
$$+ \ 2 \ \frac{3}{8}$$

Set B

$$4 \ \frac{5}{8}$$
$$+ \ 2 \ \frac{7}{8}$$

Set B

$$5$$
$$- \ 2 \ \frac{5}{8}$$

Set B

$$6 \ \frac{1}{8}$$
$$- \ 2 \ \frac{5}{8}$$

Set B

$$5 \ \frac{3}{8}$$
$$- \ 2 \ \frac{5}{8}$$

Set B

$$5 \ \frac{3}{8}$$
$$- \ 2 \ \frac{7}{8}$$

Set B

$$6 \ \frac{5}{8}$$
$$- \ 2 \ \frac{7}{8}$$

Set B

$$5$$
$$- \ 2 \ \frac{3}{8}$$

Set B

Set B₂

$$5 \ \frac{1}{8}$$
$$+ \ 2 \ \frac{5}{8}$$

Set B

$$4 \ \frac{3}{8}$$
$$+ \ 2 \ \frac{5}{8}$$

Set B

$$4 \ \frac{7}{8}$$
$$+ \ 2 \ \frac{3}{8}$$

Set B

$$4 \ \frac{5}{8}$$
$$+ \ 2 \ \frac{7}{8}$$

Set B

$$5$$
$$- \ 2 \ \frac{5}{8}$$

Set B

$$6 \ \frac{1}{8}$$
$$- \ 2 \ \frac{5}{8}$$

Set B

$$5 \ \frac{3}{8}$$
$$- \ 2 \ \frac{5}{8}$$

Set B

$$5 \ \frac{3}{8}$$
$$- \ 2 \ \frac{7}{8}$$

Set B

$$6 \ \frac{5}{8}$$
$$- \ 2 \ \frac{7}{8}$$

Set B

$$5$$
$$- \ 2 \ \frac{3}{8}$$

Set B

Storage Suggestions: Copy the **Problem (Set B)** cards and **Answer (Set B)** cards in two different colors.
Store 1 set of each in a sealable bag for each pair of students.

Set B₁		Set B₂	
$7\dfrac{3}{4}$ Set B	$3\dfrac{1}{2}$ Set B	$7\dfrac{3}{4}$ Set B	$3\dfrac{1}{2}$ Set B
$7\dfrac{1}{4}$ Set B	$2\dfrac{3}{4}$ Set B	$7\dfrac{1}{4}$ Set B	$2\dfrac{3}{4}$ Set B
$7\dfrac{1}{2}$ Set B	$2\dfrac{1}{2}$ Set B	$7\dfrac{1}{2}$ Set B	$2\dfrac{1}{2}$ Set B
7 Set B	$3\dfrac{3}{4}$ Set B	7 Set B	$3\dfrac{3}{4}$ Set B
$2\dfrac{3}{8}$ Set B	$2\dfrac{5}{8}$ Set B	$2\dfrac{3}{8}$ Set B	$2\dfrac{5}{8}$ Set B

Problem Cards (Set C)

Storage Suggestions: Copy the **Problem (Set C)** cards and **Answer (Set C)** cards in two different colors.
Store 1 set of each in a sealable bag for each pair of students.

Set C₁

$5 \ \frac{1}{12}$ $+ \ 2 \ \frac{5}{12}$ Set C	$6 \ \frac{3}{12}$ $+ \ 2 \ \frac{9}{12}$ Set C	$4 \ \frac{5}{12}$ $+ \ 2 \ \frac{10}{12}$ Set C	$4 \ \frac{9}{12}$ $+ \ 2 \ \frac{7}{12}$ Set C	5 $- \ 2 \ \frac{3}{12}$ Set C
$6 \ \frac{1}{12}$ $- \ 1 \ \frac{5}{12}$ Set C	$5 \ \frac{3}{12}$ $- \ 1 \ \frac{9}{12}$ Set C	$5 \ \frac{5}{12}$ $- \ 2 \ \frac{10}{12}$ Set C	$6 \ \frac{9}{12}$ $- \ 2 \ \frac{7}{12}$ Set C	5 $- \ 2 \ \frac{10}{12}$ Set C

Set C₂

$5 \ \frac{1}{12}$ $+ \ 2 \ \frac{5}{12}$ Set C	$6 \ \frac{3}{12}$ $+ \ 2 \ \frac{9}{12}$ Set C	$4 \ \frac{5}{12}$ $+ \ 2 \ \frac{10}{12}$ Set C	$4 \ \frac{9}{12}$ $+ \ 2 \ \frac{7}{12}$ Set C	5 $- \ 2 \ \frac{3}{12}$ Set C
$6 \ \frac{1}{12}$ $- \ 1 \ \frac{5}{12}$ Set C	$5 \ \frac{3}{12}$ $- \ 1 \ \frac{9}{12}$ Set C	$5 \ \frac{5}{12}$ $- \ 2 \ \frac{10}{12}$ Set C	$6 \ \frac{9}{12}$ $- \ 2 \ \frac{7}{12}$ Set C	5 $- \ 2 \ \frac{10}{12}$ Set C

Answer Cards (Set C)

Set C$_1$		Set C$_2$	
$7\dfrac{1}{12}$ Set C	$4\dfrac{2}{3}$ Set C	$7\dfrac{1}{12}$ Set C	$4\dfrac{2}{3}$ Set C
$7\dfrac{1}{4}$ Set C	$3\dfrac{1}{2}$ Set C	$7\dfrac{1}{4}$ Set C	$3\dfrac{1}{2}$ Set C
$7\dfrac{1}{3}$ Set C	$2\dfrac{7}{12}$ Set C	$7\dfrac{1}{3}$ Set C	$2\dfrac{7}{12}$ Set C
9 Set C	$4\dfrac{1}{6}$ Set C	9 Set C	$4\dfrac{1}{6}$ Set C
$2\dfrac{3}{4}$ Set C	$2\dfrac{1}{6}$ Set C	$2\dfrac{3}{4}$ Set C	$2\dfrac{1}{6}$ Set C

Questions for Solving Word Problems

Q₁

What is the problem about?

Q₂

What do I need to find?

Q₃

What do I know?

Q₄

What can I try?

Q₅

Does my answer make sense?

Steps for Solving Word Problems

Q₁. What is the problem about?

Q₂. What do I need to find?

Q₃. What do I know?

Q₄. What can I try?

Q₅. Does my answer make sense?