

# Tape Diagrams: Mixed Number Sums

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Tape diagrams are a visual way to express solutions for Mixed number addition problems.  
This can be done in 4 steps:

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

## Step 1: Use the Associative Property

Use the associative property of addition to add the whole numbers:  $(2 + 3) + (\frac{3}{5} + \frac{1}{3})$

... which becomes:  $5 + (\frac{3}{5} + \frac{1}{3})$

## Step 2: Tape Diagram the Expression

The whole numbers are resolved, but the fraction denominators are mismatched.



## Step 3: Make a Table

We can find the least common multiple by making a factor table for each denominator.  
When you reach the least common multiple, check the factor.

Factor: (x)	1	2	3	4	5	
Multiples of 3:	3	6	9	12	15	Each partition of three is 5/15
Factor (x):	1	2	3			
Multiples of 5:	5	10	15			Each partition of five is 3/15

The least common multiple is 15.

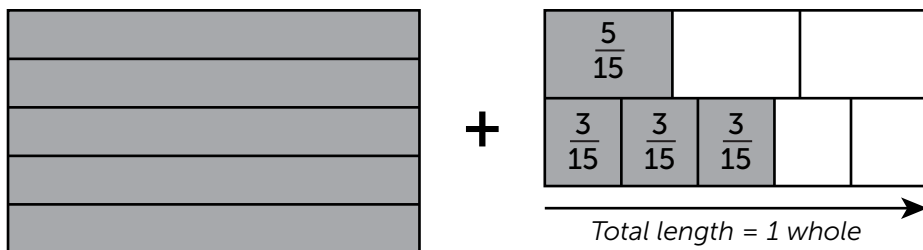
The denominators are in 15ths.

Each partition of 3 is 5/15 and

Each partition of 5 is 3/15, like below:

## Step 4: Tape Diagram the Fractions and Solve

Use the information from the table to label your tape diagram fractions.



The sum can now be calculated as:  $5 + \frac{3}{15} + \frac{3}{15} + \frac{3}{15} + \frac{5}{15} = 5\frac{14}{15}$

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## Try It!

**Directions:** Use the 4 step procedure to create tape diagram sums of the following exercises.

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

**Step 1: Use the Associative Property** \_\_\_\_\_

**Step 2: Tape Diagram the Expression**

**Step 3: Make a Table**

**Step 4: Tape Diagram the Fractions and Solve**

# Tape Diagrams: Mixed Number Sums

Name: \_\_\_\_\_

Date: \_\_\_\_\_

2.  $4\frac{1}{2} + 1\frac{2}{6}$

Step 1: *Use the Associative Property* \_\_\_\_\_

Step 2: *Tape Diagram the Expression*

Step 3: *Make a Table*

Step 4: *Tape Diagram the Fractions and Solve*

# Tape Diagrams: Mixed Number Sums

Name: \_\_\_\_\_

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

Step 1: *Use the Associative Property* \_\_\_\_\_

Step 2: *Tape Diagram the Expression*

Step 3: *Make a Table*

Step 4: *Tape Diagram the Fractions and Solve*

# Tape Diagrams: Mixed Number Sums

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**4.** Create and solve your own mixed number addition problem using the 4-step procedure from above. \_\_\_\_\_

**Step 1:** *Use the Associative Property* \_\_\_\_\_

**Step 2:** *Tape Diagram the Expression*

**Step 3:** *Make a Table*

**Step 4:** *Tape Diagram the Fractions and Solve*