Tape Diagrams: Mixed Number Sums

Name: _____ Date: _____

Try It!

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

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

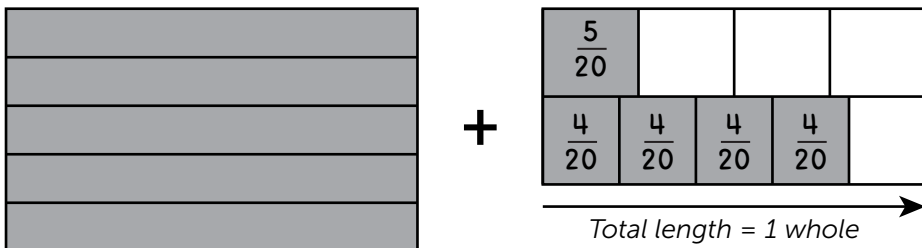**Step 1:** *Use the Associative Property* $(2 + 3)+(\frac{1}{4} +\frac{4}{5})$

Step 2: *Tape Diagram the Expression* $5+(\frac{1}{4} +\frac{4}{5})$

Step 3: *Make a Table*

Factor: (x)	1	2	3	4	5	
Multiples of 4:	4	8	12	16	20	Each partition of four is 5/20
Factor (x):	1	2	3	4		
Multiples of 5:	5	10	15	20		Each partition of five is 4/20

Step 4: *Tape Diagram the Fractions and Solve*

Total length = 1 whole

$5 +\frac{4}{20} + \frac{4}{20} + \frac{4}{20} + \frac{4}{20} + \frac{5}{20} = 5 \frac{21}{20} = 6 \frac{1}{20}$

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

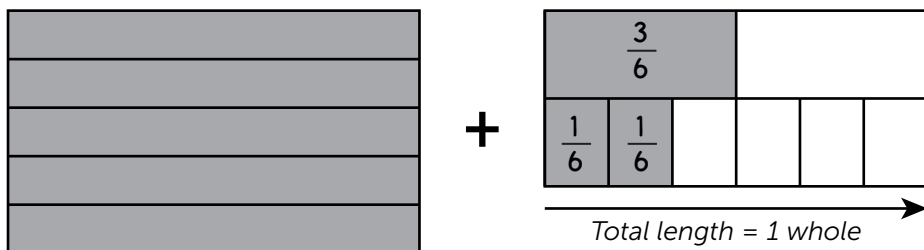**Step 1:** *Use the Associative Property* $(4 + 1) + (\frac{1}{2} + \frac{2}{6})$

Step 2: *Tape Diagram the Expression* $5 + (\frac{1}{2} + \frac{2}{6})$

Step 3: *Make a Table*

Factor: (x)	1	2	3	
Multiples of 2:	2	4	6	Each partition of two is 3/6
Factor (x):	1			
Multiples of 6:	6			Each partition of six is 1/6

Step 4: *Tape Diagram the Fractions and Solve*

Total length = 1 whole

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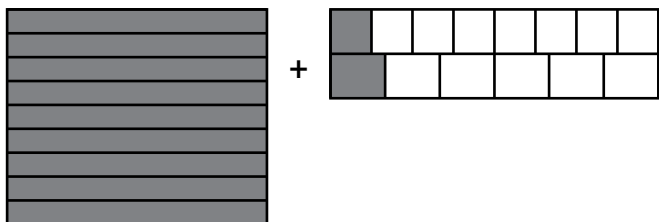
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3. $2\frac{1}{8} + 7\frac{1}{6}$

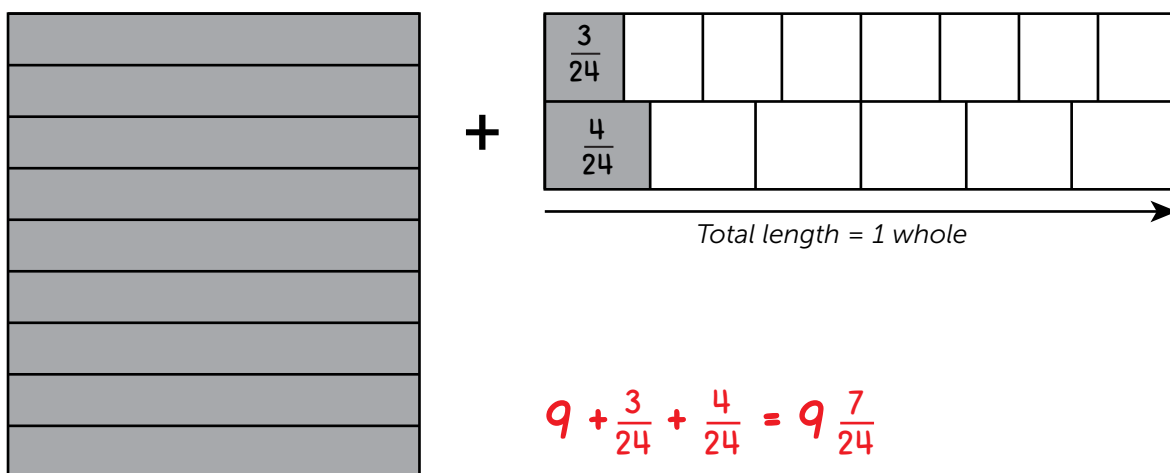**Step 1:** *Use the Associative Property* $(2+7)+(\frac{1}{8}+\frac{1}{6})$

Step 2: *Tape Diagram the Expression* $9+(\frac{1}{8}+\frac{1}{6})$

Step 3: *Make a Table*

Factor: (x)	1	2	3	4	
Multiples of 6:	6	12	18	24	Each partition of six is 4/24
Factor (x):	1	2	3		
Multiples of 8:	8	16	24		Each partition of eight is 3/24

Step 4: *Tape Diagram the Fractions and Solve*

Total length = 1 whole

$$9 + \frac{3}{24} + \frac{4}{24} = 9\frac{7}{24}$$

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

_____

Step 1: *Use the Associative Property*   _____

Step 2: *Tape Diagram the Expression*

Answers will vary, but should
clearly show all four steps in the
procedure from today's lesson.

Step 3: *Make a Table*

Step 4: *Tape Diagram the Fractions and Solve*