

# Adding Mixed Numbers

To add mixed numbers, you can add the fractional parts to the whole number parts, and then simplify.

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

The fractions have a common denominator. Add the fractions. Then add the whole numbers.

$$\begin{array}{r} 2\frac{2}{4} \\ +3\frac{1}{4} \\ \hline 5\frac{3}{4} \end{array}$$

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

Write equivalent fractions with the LCD.

$$\begin{array}{r} 3\frac{2}{3} = 3\frac{6}{9} \\ +4\frac{1}{9} = 4\frac{1}{9} \\ \hline \end{array}$$

Add the whole numbers.  
Add the fractions.  
Simplify if possible.

$$\begin{array}{r} 3\frac{6}{9} \\ +4\frac{1}{9} \\ \hline 7\frac{7}{9} \end{array}$$

Find  $4 + 3\frac{3}{5}$ .

Add the whole numbers; then add the fraction.

$$\begin{array}{r} 4 \\ +3\frac{3}{5} \\ \hline 7\frac{3}{5} \end{array}$$

Find each sum. Simplify your answer.

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

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

3.  $5\frac{3}{5} + \frac{3}{10} =$  \_\_\_\_\_

4.  $8\frac{5}{8} + 1\frac{5}{12} =$  \_\_\_\_\_

5.  $6\frac{1}{4} + 11\frac{3}{8} =$  \_\_\_\_\_

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

7. In 2001, the men's indoor pole vault record was  $20\frac{1}{6}$  ft. The women's record for the indoor pole vault was  $15\frac{5}{12}$  ft. What is the combined height of the two records? \_\_\_\_\_

8. **Writing in Math** How high is a stack of library books if one book is  $1\frac{3}{8}$  in. high, the second book is  $1\frac{5}{6}$  in. high, and the third is  $2\frac{1}{3}$  in. high? Explain how you solved this problem.

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# Subtracting Mixed Numbers

To subtract mixed numbers, the fractional parts must have the same denominator.

	Step 1	Step 2	Step 3
Find $9\frac{1}{12} - 4\frac{5}{8}$ .	Estimate. $9 - 4 = 5$  Write equivalent fractions for the LCD.  $9\frac{1}{12} = 9\frac{2}{24}$  $-4\frac{5}{8} = -4\frac{15}{24}$	Before you can subtract, rename $9\frac{2}{24}$ to show more twenty-fourths.  $9\frac{2}{24} = 8 + \frac{24}{24} + \frac{2}{24} = 8\frac{26}{24}$  $-4\frac{15}{24}$	Subtract and simplify if possible.  $8\frac{26}{24}$ $-4\frac{15}{24}$ <hr/> $4\frac{11}{24}$
Find $10 - 4\frac{2}{5}$ .	There is no fraction from which to subtract $\frac{2}{5}$ .	Rename 10 to show fifths.  $10 = 9 + \frac{5}{5} = 9\frac{5}{5}$	Subtract. Simplify if possible.  $9\frac{5}{5}$ $-4\frac{2}{5}$ <hr/> $5\frac{3}{5}$

Find each difference. Simplify if possible.

1.  $5\frac{9}{10} - 2\frac{3}{5} =$  \_\_\_\_\_      2.  $11\frac{7}{16} - 8\frac{3}{8} =$  \_\_\_\_\_      3.  $9\frac{2}{3} - 9\frac{1}{6} =$  \_\_\_\_\_

4.  $4\frac{2}{3} - 2 =$  \_\_\_\_\_      5.  $4\frac{1}{4} - \frac{7}{12} =$  \_\_\_\_\_      6.  $5\frac{6}{7} - 2\frac{13}{14} =$  \_\_\_\_\_

7. **Number Sense** How do you know if you need to rename the first number in a subtraction problem involving mixed numbers?

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