ADDING MIXED NUMBERS WITH UNLIKE DENOMINATORS

ANSWERS

Add the mixed numbers. Make sure the final answer is in simplest form.

HELPFUL EXAMPLE #1

$2\frac{1}{4} + 4\frac{2}{6}$ YOU ARE ADDING MIXED NUMBERS WHICH MEANS YOU HAVE WHOLE NUMBERS AND FRACTIONS.

$\frac{1}{4} + \frac{2}{6} = \boxed{\frac{7}{12}}$ FIRST, ADD THE FRACTIONS. THEY DO NOT HAVE COMMON DENOMINATORS SO YOU WILL NEED TO FIND THE LEAST COMMON DENOMINATOR (LCD) OR LEAST COMMON MULTIPLE (LCM).

HOW DID WE GET THAT ANSWER?

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

FIND THE LEAST COMMON MULTIPLE	
1 x 4 = 4 2 x 4 = 8 3 x 4 = 12 ** 4 x 4 = 16	1 x 6 = 6 2 x 6 = 12 ** 3 x 6 = 18
** THEY HAVE *12* IN COMMON **	

$\rightarrow \left\{ \frac{1}{4} \times \frac{3}{3} = \frac{3}{12} \right.$

$\left. \frac{2}{6} \times \frac{2}{2} = \frac{4}{12} \right.$

SEE HOW THEY NOW HAVE COMMON DENOMINATORS?

WE NEED TO CHANGE THE DENOMINATORS (BOTTOM NUMBERS) TO *12*, BUT REMEMBER, WHAT EVER WE DO TO THE BOTTOM WE NEED TO DO TO THE TOP!!!

NOW WE CAN ADD. $\frac{3}{12} + \frac{4}{12} = \boxed{\frac{7}{12}}$ ***ANSWER***

$2 + 4 = \boxed{6}$ SECOND, QUICKLY ADD THE WHOLE NUMBERS.

$6 + \frac{7}{12} = \mathbf{6\frac{7}{12}}$ LAST, PUT THE TWO ANSWERS TOGETHER. MAKE SURE IT IS IN SIMPLEST FORM.

Now your turn.

1. $3\frac{1}{2} + 2\frac{1}{3}$ **$5\frac{5}{6}$**

2. $7\frac{2}{5} + 9\frac{3}{10}$ **$16\frac{7}{10}$**

3. $5\frac{3}{8} + 4\frac{7}{12}$ **$9\frac{23}{24}$**

HELPFUL EXAMPLE #2

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

x 2 x 1 FIRST, ADD THE FRACTIONS.

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

THE COMMON DENOMINATOR IS 8. ALSO THE ANSWER IS AN IMPROPER FRACTION.

LEAST COMMON MULTIPLE	
1 x 4 = 4 2 x 4 = 8 ** 3 x 4 = 12	1 x 8 = 8 ** 2 x 8 = 16

$\Rightarrow \frac{11}{8} = \boxed{1\frac{3}{8}}$

THE IMPROPER FRACTION NEEDS TO BE CHANGED TO A MIXED NUMBER. ASK YOURSELF, "HOW MANY 8's GO INTO 11?" OR "WHAT IS 11 DIVIDED BY 8?" ONE 8 GOES INTO 11 AND YOU WILL HAVE 3 LEFT OVER.

NOW YOU HAVE ANOTHER WHOLE NUMBER THAT NEEDS TO BE ADDED.

$3 + 5 = \boxed{8}$ SECOND, ADD THE WHOLE NUMBERS.

$8 + 1\frac{3}{8} = \mathbf{9\frac{3}{8}}$ LAST, PUT THE TWO ANSWERS TOGETHER.

Now your turn.

4. $8\frac{5}{6} + 9\frac{3}{4}$ **$18\frac{7}{12}$**

5. $6\frac{2}{3} + 3\frac{1}{5}$ **$9\frac{13}{15}$**

6. $\frac{5}{9} + 5\frac{7}{12}$ **$6\frac{5}{36}$**