

ADD AND SUBTRACT MIXED NUMBERS

HOMEWORK GRADE

02/03/2021

Select the correct answer. Always simplify to find your lowest fraction.

Example: Solve for the sum of $2\frac{4}{8} + 2\frac{1}{4}$.

Step 1: Set up your problem $\rightarrow 2\frac{4}{8} + 2\frac{1}{4} =$

Step 2: Turn your mixed numbers into improper fractions.

$$\begin{array}{c} + \\ \curvearrowright \\ 2\frac{4}{8} = \frac{20}{8} \\ \curvearrowleft \\ x \end{array} \quad \text{and} \quad \begin{array}{c} + \\ \curvearrowright \\ 2\frac{1}{4} = \frac{9}{4} \\ \curvearrowleft \\ x \end{array}$$

Step 3: Rewrite the problem using the improper fraction

$$\frac{20}{8} + \frac{9}{4} =$$

Step 4: Find the LCM using the two denominators in order to find a common denominator

$$\begin{array}{ccccc} & 8 & & 4 & \\ 8 & & & & 4 \\ 16 & & & & 8 \\ 24 & & & & 12 \\ 32 & & & & 16 \\ 40 & & & & 20 \end{array} \quad \text{LCM} = 8$$

1. Solve for the sum of $2\frac{3}{12} + 2\frac{1}{4}$.

$4\frac{6}{12}$	$4\frac{1}{2}$	$4\frac{3}{16}$
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2. Solve for the sum of $1\frac{2}{6} + 1\frac{1}{3}$.

$2\frac{3}{9}$	$2\frac{4}{6}$	$2\frac{2}{3}$
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3. Solve for the difference of $3\frac{2}{8} - 1\frac{3}{4}$.

$1\frac{4}{8}$	$1\frac{1}{2}$	$2\frac{1}{4}$
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Step 5: Change your denominators to 8 for the common denominator. Then change your numerator. Since $\frac{20}{8}$ already has a denominator of 8, your numerator will not change. The fraction $\frac{9}{4}$ needs to be changed, the 4 becomes 8 by being multiplied by 2, so the numerator 9 has to be multiplied by 2 to equal 18. Now solve!

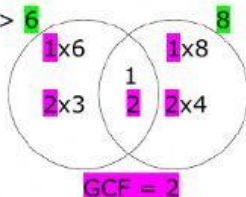
$$\frac{20}{8} + \frac{18}{8} = \frac{38}{8}$$

Step 6: Turn your improper fraction $\frac{38}{8}$ back into a mixed number by dividing the numerator by the denominator.

$$\begin{array}{r} 4 \text{ R } 6 \\ 8 \overline{)38} \\ \underline{-32} \\ 6 \end{array} = 4 \frac{6}{8}$$

Step 7: Simplify your answer by finding the GCF of your answer in step 1.

numerator -> 6 8 <- denominator



Step 8: Divided your numerator and denominator by the GCF. Keep your whole number the same.

$$\frac{6}{8} \div \frac{2}{2} = \frac{3}{4}$$

Final Answer: $4 \frac{3}{4}$

4. Solve for the difference of $2\frac{1}{3} - 1\frac{1}{9}$.

$2\frac{1}{9}$	$1\frac{0}{6}$	$\frac{11}{9}$
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* Remember – if your GCF = 1, then your fraction is in its simplest form, it stays the same.