

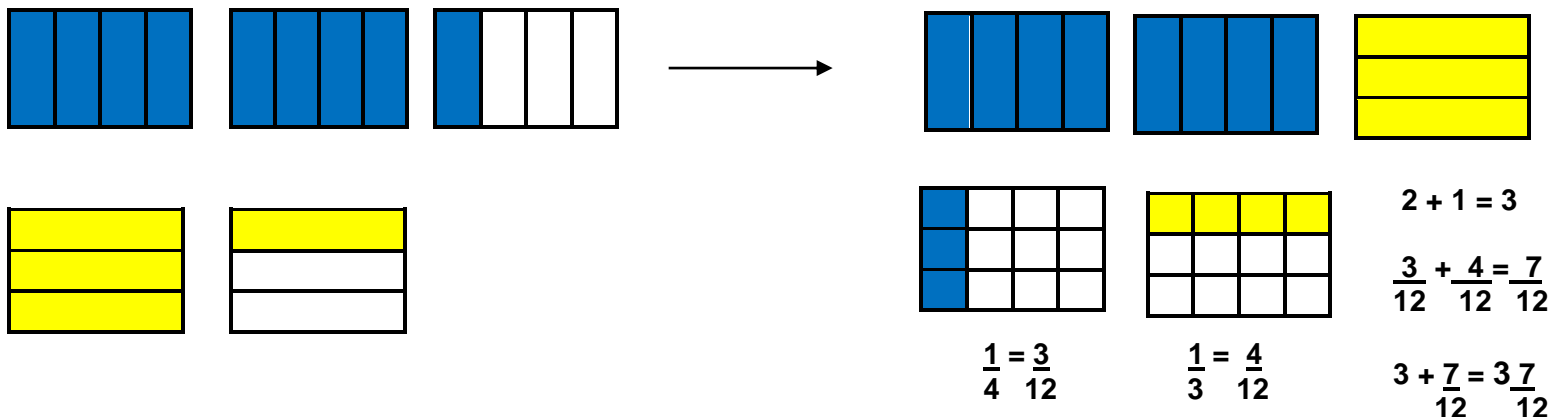
Word Problems: Adding Mixed Numbers

1. Select five word problems from the pack. Use fraction models and equations to solve each problem.
2. Explain your strategy for solving **one** problem.

Example: Tom bought $2\frac{1}{4}$ kilograms of bananas and $1\frac{1}{3}$ kilograms of grapes. How many kilograms of fruit did Tom buy in all?

Explanation: I needed to find the sum of $2\frac{1}{4}$ and $1\frac{1}{3}$. I drew fraction models to represent the problem and added the whole numbers, $2+1=3$. I partitioned $\frac{1}{4}$ and $\frac{1}{3}$ into twelfths so that the units were the same. Next, I added $\frac{3}{12} + \frac{4}{12} = \frac{7}{12}$ and $3 + \frac{7}{12} = 3\frac{7}{12}$.

Tom bought $3\frac{7}{12}$ kg of fruit.



Word Problems: Adding Mixed Numbers

1. Select five word problems from the pack. Solve each problem by finding a common unit and then adding.
2. Explain your strategy for solving **one** problem.

Example: A baker used $4\frac{1}{2}$ bags of flour baking cakes and $3\frac{3}{5}$ bags of flour baking cookies. How much flour did he use in all?

$$\begin{aligned} & 4\frac{1}{2} + 3\frac{3}{5} \\ &= 7\frac{1}{2} + \frac{3}{5} \\ &= 7\frac{5}{10} + \frac{6}{10} \\ &= 7\frac{11}{10} \\ &= 8\frac{1}{10} \end{aligned}$$

Explanation: I needed to find the sum of $4\frac{1}{2} + 3\frac{3}{5}$. I added the whole numbers $4+3=7$, then renamed $\frac{1}{2}$ and $\frac{3}{5}$ so that the units would be the same. To do this I listed multiples of 2 and 5 and found that the lowest common denominator was 10. 2: 2,4,6,8,10
5: 5,10

I renamed $\frac{1}{2}$ as $\frac{5}{10}$ ($\frac{1}{2} \times \frac{5}{5} = \frac{5}{10}$) and $\frac{3}{5}$ as $\frac{6}{10}$ ($\frac{3}{5} \times \frac{2}{2} = \frac{6}{10}$). Then I added the fractions for a sum of $7\frac{11}{10}$ which is equal to $8\frac{1}{10}$. The baker used $8\frac{1}{10}$ bags of flour.

Word Problems: Adding Mixed Numbers (Unlike Denominators)

A recipe calls for $2\frac{2}{4}$ cups of walnuts and $3\frac{3}{8}$ cups of pecans. How many cups of nuts are needed in all for the recipe?



A

When painting my bedroom I used $3\frac{1}{2}$ liters of blue paint and $2\frac{1}{4}$ liters of red paint. How much paint did I use in all?



B

Mary used $6\frac{1}{3}$ liters to water her vegetable patch and $2\frac{6}{9}$ liters to water her flower pots. How many liters of water did Mary use on her garden?



C

Two sides of a triangle measure $5\frac{1}{2}$ cm. The third side measures $3\frac{3}{8}$ cm. What is the perimeter of the triangle? What type of triangle is it?



D

I mixed $3\frac{3}{4}$ grams of blue paint with $1\frac{2}{5}$ grams of yellow paint to make green paint. How many grams of green paint did I mix?



E

An irregular shaped pentagon measures $5\frac{1}{3}$ cm on two sides. All other sides measure $4\frac{3}{4}$ cm. What is the perimeter of the pentagon?



F

At the market I bought $2\frac{3}{8}$ kg of cherries and $5\frac{3}{4}$ kg of grapes. What was the total mass, in kilograms, of the fruit I bought?



G

In my first triathlon I ran for $5\frac{1}{4}$ km, swam for $2\frac{1}{2}$ km, and rode my racing bike for $4\frac{7}{8}$ km. What was the total distance I completed in the triathlon?



H