

Adding Mixed Numbers

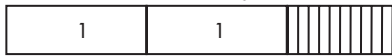
Randy talks on the telephone for $2\frac{5}{6}$ hours, and then surfs the Internet for $3\frac{3}{4}$ hours. How many hours does he spend on the two activities?

Step 1. Write equivalent fractions with the least common denominator. You can use fraction strips to show the equivalent fractions.

$$3\frac{3}{4} = 3\frac{9}{12}$$



$$2\frac{5}{6} = 2\frac{10}{12}$$



Step 2. Add the fraction part of the mixed number first. Then add the whole numbers.

$$\frac{9}{12} + \frac{10}{12} = \frac{19}{12} \qquad 3 + 2 = 5$$

$$\frac{19}{12} + 5 = 5\frac{19}{12}$$

Step 3. Simplify the sum if possible.

$$5\frac{19}{12} = 6\frac{7}{12} \text{ hours}$$

$$\text{So, } 2\frac{5}{6} + 3\frac{3}{4} = 6\frac{7}{12}.$$

In **1** through **6**, find each sum. Simplify if possible.

1.
$$\begin{array}{r} 2\frac{5}{6} \\ + 3\frac{1}{4} \\ \hline \end{array}$$

2.
$$\begin{array}{r} 1\frac{3}{8} \\ + 6\frac{3}{4} \\ \hline \end{array}$$

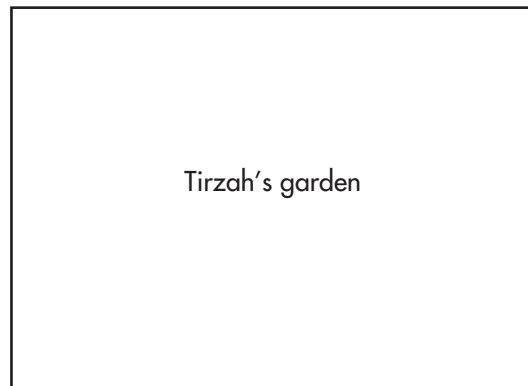
3.
$$\begin{array}{r} 5\frac{2}{5} \\ + 4\frac{1}{2} \\ \hline \end{array}$$

4. $10\frac{1}{3} + \frac{7}{9} =$ _____

5. $3\frac{1}{4} + 6\frac{2}{3} =$ _____

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

- 7.** Tirzah wants to put a fence around her garden. She has 22 yards of fence material. Does she have enough to go all the way around the garden?



$6\frac{3}{4}$ yards

$4\frac{2}{3}$ yards

Adding Mixed Numbers

In 1 through 6, find each sum. Simplify, if possible. Estimate for reasonableness.

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

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

3. $11\frac{9}{10} + 3\frac{1}{20}$ _____

4. $7\frac{6}{7} + 5\frac{2}{7}$ _____

5. $5\frac{8}{9} + 3\frac{1}{2}$ _____

6. $21\frac{11}{12} + 17\frac{2}{3}$ _____

7. Write two mixed numbers that have a sum of 3.

8. What is the total measure of an average man's brain and heart in kilograms (kg)?

Vital Organ Measures

Average woman's brain	$1\frac{3}{10}$ kg	$2\frac{4}{5}$ lb
Average man's brain	$1\frac{2}{5}$ kg	3 lb
Average human heart	$\frac{3}{10}$ kg	$\frac{7}{10}$ lb

9. What is the total weight of an average woman's brain and heart in pounds (lb)?

10. What is the sum of the measures of an average man's brain and an average woman's brain in kilograms?

11. Which is a good comparison of the estimated sum and the actual sum of $7\frac{7}{8} + 2\frac{11}{12}$?

A Estimated < actual

C Actual > estimated

B Actual = estimated

D Estimated > actual

12. Can the sum of two mixed numbers be equal to 2? Explain why or why not.
