Estimating Sums and Differences of Mixed Numbers

You can use rounding to estimate sums and differences of fractions and mixed numbers.

How to round fractions:

If the fractional part is greater than or equal to $\frac{1}{2}$, round up to the next whole number.

Example: Round $3\frac{5}{7}$ to the nearest whole number.

$\frac{5}{7}$ is greater than $\frac{1}{2}$, so $3\frac{5}{7}$ rounds up to 4.

If the fractional part is less than $\frac{1}{2}$, drop the fraction and use the whole number you already have.

Example: Round $6\frac{1}{3}$ to the nearest whole number.

$\frac{1}{3}$ is less than $\frac{1}{2}$, so drop $\frac{1}{3}$ and round down to 6.

How to estimate sums and differences of fractions and mixed numbers:

Round both numbers to the nearest whole number. Then add or subtract.

Example: Estimate $4\frac{1}{8} + 7\frac{2}{3}$.

$4\frac{1}{8}$ rounds down to 4.

$7\frac{2}{3}$ rounds up to 8.

$4 + 8 = 12$

So, $4\frac{1}{8} + 7\frac{2}{3}$ is about 12.

Round to the nearest whole number.

1. $8\frac{5}{6}$ _____

2. $13\frac{8}{9}$ _____

3. $43\frac{1}{3}$ _____

4. $7\frac{40}{81}$ _____

5. $29\frac{4}{5}$ _____

6. $88\frac{2}{4}$ _____

7. $19\frac{3}{34}$ _____

8. $63\frac{41}{49}$ _____

Estimate each sum or difference.

9. $7\frac{1}{9} + 8\frac{2}{5}$ _____

10. $14\frac{5}{8} - 3\frac{7}{10}$ _____

11. $2\frac{1}{4} + 5\frac{1}{2} + 10\frac{3}{4}$ _____

12. $11\frac{3}{5} - 4\frac{1}{12}$ _____

13. $9 + 3\frac{11}{14} + 5\frac{1}{9}$ _____

14. $15\frac{6}{7} - 12\frac{2}{10}$ _____

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Round to the nearest whole number.

1. $3\frac{3}{8}$ _____

2. $6\frac{5}{11}$ _____

3. $1\frac{11}{20}$ _____

4. $12\frac{6}{13}$ _____

Estimate each sum or difference.

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

6. $5\frac{6}{9} - 1\frac{3}{4}$ _____

7. $5\frac{5}{13} + 8\frac{3}{5}$ _____

8. $11 - 6\frac{3}{7} + 2\frac{2}{5}$ _____

Robert and May are competing in a track meet. The table at the right shows the results of their events.

9. Robert says his better jump was about 1 ft longer than May's better jump. Is he correct?

_____

_____

Participant	Event	Results/Distance
Robert	Long jump	**1.** $6\frac{5}{12}$ ft **2.** $5\frac{2}{3}$ ft
	Softball throw	$62\frac{1}{5}$ ft
May	Long jump	**1.** $4\frac{2}{3}$ ft **2.** $4\frac{3}{4}$ ft
	Softball throw	$71\frac{7}{8}$ ft

10. Use the table above. If the school record for the softball throw is 78 ft, about how much farther must Robert throw the ball to match the record?

A 15 ft   **B** 16 ft   **C** 18 ft   **D** 20 ft

11. Consider the sum of $\frac{3}{5} + \frac{3}{4}$. Round each fraction and estimate the sum. Add the two fractions using a common denominator and then round the result. Which estimate is closer to the actual answer?

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