

Name: Class:

Estimate sums and differences of mixed numbers

Estimate the sums of the following. (Round each number to the nearest whole number).

1. $27\frac{7}{12} + 2\frac{5}{6}$

2. $702\frac{10}{13} - 625\frac{7}{13}$

3. $30\frac{4}{7} - 15\frac{2}{7}$

4. $11\frac{4}{11} + 3\frac{2}{6}$

5. $133\frac{10}{15} - 126\frac{3}{17}$

6. $27\frac{2}{5} - 22\frac{3}{9}$

7. $555\frac{14}{17} - 312\frac{3}{18}$

8. $18\frac{3}{5} - 11\frac{5}{9}$

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1. $27\frac{7}{12} + 2\frac{5}{6}$

Step 1: Convert each mixed number to an improper fraction.

$$27\frac{7}{12} \rightarrow \frac{(27 \times 12) + 7}{12} = \frac{331}{12}$$

$$2\frac{5}{6} \rightarrow \frac{(2 \times 6) + 5}{6} = \frac{17}{6}$$

Step 2: Convert each improper fraction to a decimal number.

$$\frac{331}{12} = 27.5$$

← Repeating decimals

$$\frac{17}{6} = 2.8$$

← stop

Step 3: Now, Round each decimal to the nearest whole number.

27.5 to the nearest whole number = 28

2.8 to the nearest whole number = 3

Step 4: Add

so, $27\frac{7}{12} + 2\frac{5}{6} \approx 28 + 3 = \boxed{31}$

Therefore, the sum is 31.

2. $702\frac{10}{13} - 625\frac{7}{13}$

$$\begin{array}{r} 702.8 \\ - 625.5 \\ \hline 703 \\ - 626 \\ \hline \end{array}$$

so, $702\frac{10}{13} - 625\frac{7}{13} \approx 703 - 626$

$= \boxed{77}$

3. $30\frac{4}{7} - 15\frac{2}{7}$

$$\begin{array}{r} 30.6 \\ - 15.3 \\ \hline 31 \\ - 15 \\ \hline \end{array}$$

So, $30\frac{4}{7} - 15\frac{2}{7} \approx 31 - 15$

$= \boxed{16}$