Lesson

12 Estimate Sums and Differences

Here's How

Estimate the sum or difference by rounding each decimal to the place value of the first digit that is not zero.

Estimate 8.26 + 2.97. ▶

$$\begin{array}{rcll} 8.26 & \rightarrow & 8 & \text{8.26 rounds to 8.} \\ +\,2.97 & \rightarrow & +\,3 & \text{2.97 rounds to 3.} \\ & & 11 & \text{Add the rounded numbers.} \end{array}$$

The estimated sum is 11.

Remember, to round decimals, look at the digit to the right of the number being rounded. If that digit is less than 5, the number being rounded stays the same. If that digit is 5 or greater, add 1 to the number being rounded.

Estimate 0.79 − 0.62. ▶

$$\begin{array}{rcll} 0.79 & \rightarrow & 0.8 & \text{0.79 rounds to 0.8.} \\ -\,0.62 & \rightarrow & -\,0.6 & \text{0.62 rounds to 0.6.} \\ & & 0.2 & \text{Subtract the rounded numbers.} \end{array}$$

The estimated difference is 0.2.

Try These

Round to estimate each sum or difference.

TIP

To estimate sums and differences of decimals, round to the greatest place value of the non-zero digit. Then do the operation.

1. $\begin{array}{rcl} 5.7 & \rightarrow & \square \\ +\,3.1 & \rightarrow & +\,\square \\ \hline & & \square \end{array}$

2. $\begin{array}{rcl} 6.23 & \rightarrow & \square \\ +\,1.94 & \rightarrow & +\,\square \\ \hline & & \square \end{array}$

3. $\begin{array}{rcl} 4.688 & \rightarrow & \square \\ +\,3.816 & \rightarrow & +\,\square \\ \hline & & \square \end{array}$

4. $\begin{array}{rcl} 0.46 & \rightarrow & \square.\square \\ -\,0.23 & \rightarrow & +\,\square.\square \\ \hline & & \square.\square \end{array}$

5. $\begin{array}{rcl} 8.1 & \rightarrow & \square \\ -\,5.7 & \rightarrow & +\,\square \\ \hline & & \square \end{array}$

6. $\begin{array}{rcl} 5.682 & \rightarrow & \square \\ -\,3.384 & \rightarrow & +\,\square \\ \hline & & \square \end{array}$

7. $\begin{array}{rcl} 0.93 & \rightarrow & \square.\square \\ -\,0.81 & \rightarrow & -\,\square.\square \\ \hline & & \square.\square \end{array}$

8. $\begin{array}{rcl} 3.46 & \rightarrow & \square \\ +\,2.57 & \rightarrow & +\,\square \\ \hline & & \square \end{array}$

9. $\begin{array}{rcl} 5.722 & \rightarrow & \square \\ +\,4.639 & \rightarrow & +\,\square \\ \hline & & \square \end{array}$

Answers: 1. 9 2. 8 3. 8.5 4. 0.3 5. 2 6. 3 7. 0.1 8. 6 9. 11

Name _____

Go Ahead

Round to estimate each sum or difference.

Estimate sums and differences by rounding to the greatest place value of the non-zero digit and then do the operation.

1. $\begin{array}{r} 4.7 \\ +5.3 \\ \hline \end{array}$

2. $\begin{array}{r} 8.29 \\ -3.15 \\ \hline \end{array}$

3. $\begin{array}{r} 6.165 \\ -2.974 \\ \hline \end{array}$

4. $\begin{array}{r} 0.15 \\ +0.86 \\ \hline \end{array}$

5. $\begin{array}{r} 0.64 \\ +0.71 \\ \hline \end{array}$

6. $\begin{array}{r} 0.215 \\ +0.321 \\ \hline \end{array}$

Remember to write $ in your estimate.

7. $\begin{array}{r} \$4.86 \\ +\ 2.53 \\ \hline \end{array}$

8. $\begin{array}{r} \$5.35 \\ -\ 3.75 \\ \hline \end{array}$

9. $\begin{array}{r} \$7.55 \\ -\ 6.49 \\ \hline \end{array}$

10. $\begin{array}{r} 0.381 \\ +0.927 \\ \hline \end{array}$

11. $\begin{array}{r} 9.64 \\ -3.22 \\ \hline \end{array}$

12. $\begin{array}{r} 0.19 \\ +0.43 \\ \hline \end{array}$

13. $\begin{array}{r} 4.176 \\ -3.889 \\ \hline \end{array}$

14. $\begin{array}{r} 0.77 \\ +0.83 \\ \hline \end{array}$

15. $\begin{array}{r} 6.45 \\ +8.95 \\ \hline \end{array}$

16. Jesse walked 3.8 km in the morning. He walked 1.3 km in the afternoon. About how far did he walk?

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