

Frequently Asked Questions

Q: How can you estimate sums and differences with decimals?

A1: You can use the whole-number parts.

For example, to estimate $15.076 + 10.387$, use $15 + 10 = 25$. So, the sum is just over 25.

A2: If the decimals are close to 1 or less than 1, you can use the tenths.

For example, estimate $1 - 0.569$ as $1 - 0.6 = 0.4$. So, the difference is close to 0.4.

Q: How can you add decimals?

A1: You can use easier numbers and mental math.

For example, calculate $1.999 + 2.857$.

$$\begin{array}{r} 1.999 + 0.001 \quad \rightarrow \quad 2.000 \\ + 2.857 \quad \quad \quad \rightarrow \quad + 2.857 \\ \hline 4.857 - 0.001 = 4.856 \end{array}$$

A2: You can add the digits that represent the same place values and regroup when necessary.

A3: You can rename the numbers, if necessary, so that they have the same number of decimal places. Then you can calculate as though the numbers are whole numbers.

For example,

$$\begin{array}{r} 4.888 \\ + 0.99 \\ \hline \end{array} \quad \begin{array}{r} 4.888 \\ + 0.990 \\ \hline \end{array} \quad \begin{array}{r} 4888 \\ + 990 \\ \hline 5878 \end{array}$$

The sum must be 5.878 because $4.888 + 0.99$ is about $4.888 + 1 = 5.888$.

	1	1	1	
	3	.4	8	6
+	2	.8	7	9
	6	.3	6	5

Practice

Lesson 1

1. In one season, Mount Revelstoke and Glacier National Parks had 606 159 visitors. Pacific Rim National Park Reserve had 768 621 visitors.
 - a) About how many more visitors went to Pacific Rim Reserve than to Mount Revelstoke and Glacier National Parks?
 - b) How do you know that more than one million people visited these national parks?

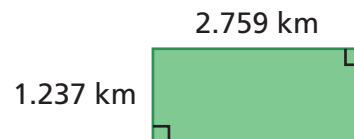
Kirsten's Explanation

I estimate that the perimeter of the park is about 8 km. About 2 km of fencing was left over.

Lesson 2

2. How can you improve Kirsten's explanation of this problem?

10 km of fencing was used to go around this park. About how much fencing was left over?



Lesson 3

3. How can you estimate the difference between 0.487 and 2?
4. Is each statement true or false? Explain.
 - a) $0.199 + 0.29 > 0.5$
 - b) $2 - 1.567 < 0.5$

Lesson 4

5. Solve each problem using mental math. Explain what you did.
 - a) It costs \$4.95 to rent a DVD. What is the cost to rent two DVDs?
 - b) What is the total mass of 2.999 kg and 1.999 kg of cheese?

Lesson 5

6. Calculate. Explain how you know each sum is reasonable.
 - a) $6.777 + 1.887$
 - b) $0.765 + 0.238$
7. Estimate to place the decimal point in each sum.
 - a) $7.66 + 2.39 = 1005$
 - b) $1.486 + 0.196 = 1682$