

IM K-5 MATH™



Unit 3

Wrapping Up Addition and Subtraction Within 1,000

3



Lesson 6

Use Strategies and Algorithms to Add

Learning Goal

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Let's consider when to use algorithms and when to use other strategies to add.

Find the value of each expression mentally.

- $300 + 156$
- $299 + 156$
- $303 + 156$
- $204 + 376$

Two methods of recording the addition of $657 + 286$ are shown.

Method 1

$$\begin{array}{r}
 1 \ 0 \ 0 \\
 1 \ 0 \\
 6 \ 5 \ 7 \\
 + 2 \ 8 \ 6 \\
 \hline
 9 \ 4 \ 3
 \end{array}$$

Method 2

$$\begin{array}{r}
 1 \ 1 \\
 6 \ 5 \ 7 \\
 + 2 \ 8 \ 6 \\
 \hline
 9 \ 4 \ 3
 \end{array}$$

How is the newly composed ten and hundred recorded differently in each method?

Try the second method of recording to add these numbers:

a. $602 + 179$

b. $493 + 161$

c. $438 + 364$

d. $329 + 381$

- A newly composed unit can be recorded with a single digit. What does the single digit represent?
- How does place value help us remember what the additional ones represent?

- We've been learning about addition algorithms for the last few lessons. Recall that an algorithm is a set of steps that works every time as long as the steps are carried out correctly.
- You know lots of ways to add numbers and lots of representations for showing your work like base-ten diagrams, number lines, and writing words or equations. If it's not a set of steps that would work every time, we call it a strategy.

Use a strategy of your choice to find the value of each sum. Show your reasoning. Organize it so it can be followed by others.

1. $199 + 348$

2. $264 + 359$

3. $203 + 75$

4. $316 + 198$

5. $399 + 499$



What strategies or algorithms do you want to practice more?

Today we saw how we can use algorithms and other strategies to add. After hearing what other students chose to use, what are your thoughts about choosing when to use an algorithm or another strategy?

Would you use an algorithm or another strategy to find the value of $299 + 179$?

Explain your reasoning.

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