Unit 3, Lesson 6

Use Strategies and Algorithms to Add

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

Warm-up

Number Talk: Little More, Little Less

Find the value of each expression mentally.

- $300 + 156$

- $299 + 156$

- $303 + 156$

- $204 + 376$

Activity 1

Just Ones

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

Method 1

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

Method 2

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

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

2. Try using the second method of recording to add these numbers:

   a. $602 + 179$

   b. $493 + 161$

   c. $438 + 364$

   d. $329 + 381$

Activity 2

How Would You Add?

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

1. $199 + 348$

2. $264 + 359$

3. $203 + 75$



4. $316 + 198$

5. $399 + 499$

Section A Summary

We learned that an **algorithm** is a set of steps that works every time as long as the steps are carried out correctly. Then we learned algorithms to add numbers within 1,000.

We also learned that we can choose to add using a strategy or an algorithm, based on the numbers being added.

$$\begin{array}{rrrrrrr} & 300 & + & 60 & + & 2 \\ + & 300 & + & 50 & + & 9 \\ \hline & 600 & + & 110 & + & 11 \end{array}$$

$$\begin{array}{r} 362 \\ +\ 359 \\ \hline 11 \\ 110 \\ +\ 600 \\ \hline 721 \end{array}$$

$$\begin{array}{r} {\scriptstyle 1\ 0\ 0} \\ {\scriptstyle \ \ 1\ 0} \\ 362 \\ +\ 359 \\ \hline 721 \end{array}$$

$$\begin{array}{r} {\scriptstyle 1\ 1} \\ 362 \\ +\ 359 \\ \hline 721 \end{array}$$