

Teaching Unit 5 (Continued)

Math Background

Subtraction Methods

$$136 - 47 = \square$$

Boxes, Sticks, and Circles Children draw the number that is being subtracted from using boxes, sticks, and circles. They show the ungrouping in their drawings. Then they cross out to subtract. Children relate the drawings to a numerical method. They may do different numerical methods.

$$\begin{array}{r} 136 \\ - 47 \\ \hline \end{array}$$

Ungroup 1 hundred = 10 tens

Ungroup 1 ten = 10 ones

Subtract 4 tens
Subtract 7 ones

There are 8 tens and 9 ones, or 89, left.

Expanded Method Children break apart the numbers to begin. They break apart 3-digit numbers into hundreds, tens, and ones, and 2-digit numbers into tens and ones. This helps them see the real value of each part of the number as they ungroup and subtract.

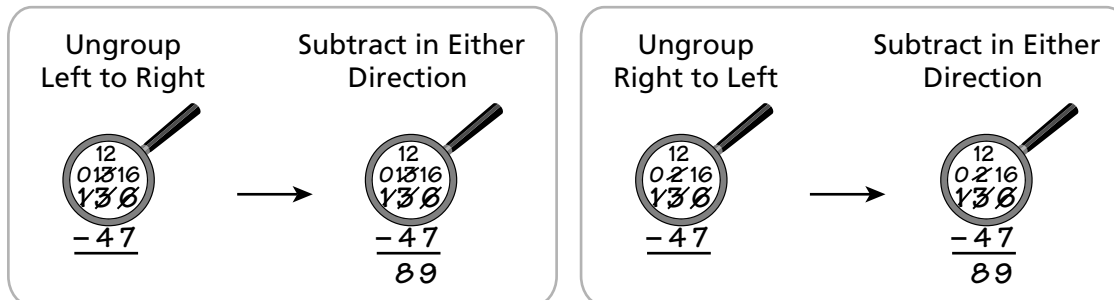
Ungrouping Left to Right

$$\begin{array}{r} 136 = 100 + 30 + 6 \\ - 47 = \quad 40 + 7 \\ \hline 80 + 9 = 89 \end{array}$$

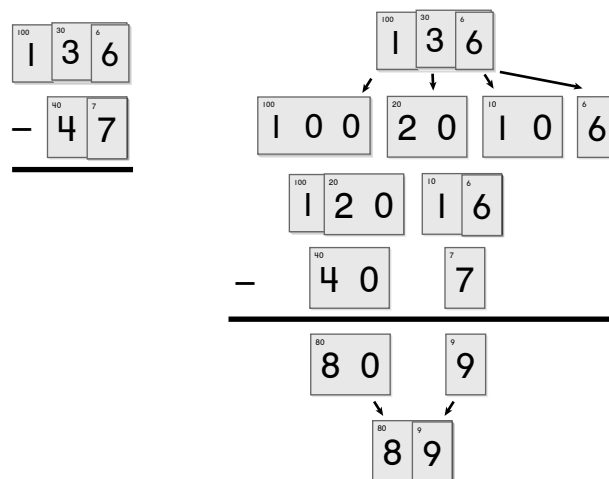
Ungrouping Right to Left

$$\begin{array}{r} 136 = 100 + 30 + 6 \\ - 47 = \quad 40 + 7 \\ \hline 80 + 9 = 89 \end{array}$$

Ungroup First Method Children will continue their understanding of a number and its value as they learn how to work with the number they are subtracting from as a whole. They ungroup everything first to prepare the number for subtraction. A magnifying glass enables children to “look inside” the number and see that they are not changing the number to a new amount, but are, instead, making a new form of the number. For the advantages of this method over the common subtraction method, see page 615.



Secret Code Cards These are especially helpful in showing the Expanded Method.



Adding Up Method Children are introduced to finding unknown addends. This strategy is based on Counting On and Making a Ten. The three ways that children can add up to find the unknown partner are shown in these examples.

