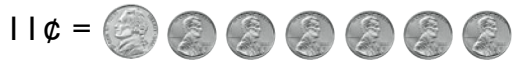


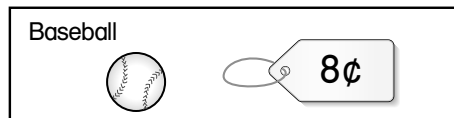
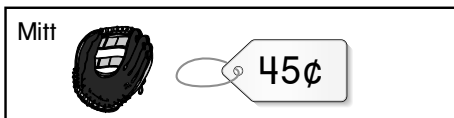
# Math Background

## Money

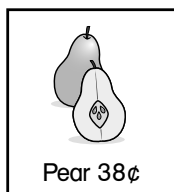
**Coins** Children begin Unit 8 by showing money amounts with dimes, nickels, and pennies and by exploring equivalent coin combinations.



They learn to exchange pennies for nickels or dimes. When combining two amounts this results in a new ten being made. This experience with grouping not only helps children become more adept with the money system, but also paves the way for regrouping when they add two 2-digit numbers.



**Making Change** Children will use what they learn about unknown addends to make change. They solve these problems either by counting on with sticks and circles or by counting on with actual (or drawn) pennies and dimes. Buying and selling scenarios are used to give children practice with these methods.

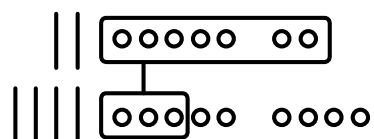
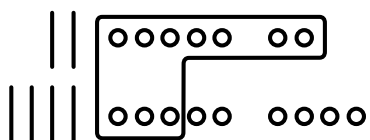
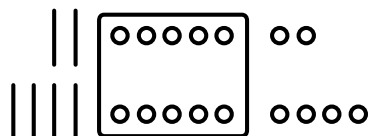


The buyer should get 62¢ back.



### Grouping with Sticks and Circles

Then the class moves to pencil and paper representations. At this stage, children are encouraged to generate their own techniques for 2-digit addition problems. Some children will create methods of counting on with tens and ones, but most will rely on the sticks and circles notation that they already know. Children figure out a way to adapt this notation to the new requirements of grouping. The following are some common representations for  $27 + 49$ .



Any method that makes use of tens and ones is an acceptable method at this point. Children are asked to share and explain their methods so that many methods are available for children to try.

From the beginning, children link a step in their drawing to a step in their numeric method. This helps the numeric methods take on quantitative meaning. Various numeric methods are shown on the next page and discussed on pages 681 and 692–694.