Commentary

Venus, XI

1. **(15¢)** Some students may give the answer as coins, instead of as 15¢. They may say they would get back a dime and a nickel, or 15 pennies, or some other combination. Students who have trouble with this problem might want to play a game with a partner, one being the clerk and handing over the change, and then switch roles. They would start counting back the change a penny at a time, and then move to other coins.

2. **(22)** 6 + 4 + 4 + 4 + 4 gives 22 steps. Walking off the paces is an active way of getting the answer. Students might also draw a diagram, with each step marked off.

3. **(9)** The key point that some students will overlook is that Jessica must also be counted. Making a "stick figure" diagram helps students see Jessica also.

4. **(6 + 6 = 12)** Students need to draw in 6 dots to make the domino a double. Then 6 + 6 = 12 is the addition sentence.

5. **(6)** An answer can be obtained by visually marking off the length of the paper clip several times in a chain, or measuring it and marking it off accurately. Some students might come up with an answer of 3, 3 1/2, or 4, because they used a real paper clip instead of the one shown. They should get their stars for this -- the problem doesn't say to use the one shown as the standard unit.

6. **(26)** Students can *count on* and *count back* to find the answer mentally. Some students will find it troublesome that, the way the problem is laid out, the single digits 3, 2, and 1 are lined up under the tens digit of 24. They might be tempted to combine the digits that are lined up, rather than considering the numbers in context. Acting out the problem should help.

7. **($6)** This problem leads into the next one, problem 8. Hopefully students have previously encountered a sequence of steps to be followed to solve a problem -- a flowchart is simply a way to visualize those steps. Students who have trouble might go through the steps with play money.

8. **(6)** This problem reverses the thinking pattern of the problem above, number 7. In it, students are asked what number they start with so that, after the steps are followed, they get the end result stated. There are two generally approaches to this type of problem -- *guess-check-revise* to find the start number, or *work backwards* by reversing the steps. If this is their first encounter to such a problem, *guess-check-revise* is the best approach. Students are encouraged to simply guess a start number, do the computation, and if they don't get the indicated answer, guess a higher or lower start number because of what they learned. They keep *guessing-checking-revising* until they are successful.