Commentary
Mars, IX

1. **(5)** *Working backwards* is one strategy to use. The student asks, "What number, when I subtract 3, leaves 17?" The answer is 20. Continuing, the student asks, "What number multiplied by 4 gives 20?" The answer is 5. By *working backward* the student arrives at 5.

2. **(a. >; b. >; c. <; d. =)** If students compute on both sides of the box, they'll find in (a) that they get 65 on the left and 61 on the right. For (b), they get 20 and 18, for (c) they get 14 and 23, and for (d) they get 8 and 8.

3. **(4)** The student needs to subtract the 68 students that ride the bus from the total of 84. That leaves 16 students to ride in cars. Since 4 students can ride in each car, counting by 4's will show that four cars are needed.

4. **(at least 9)** This problem can be solved by multiplying 4 x 2, or adding 2 four times, since the doorbell rang 4 times and 2 friends arrived at each ring. But the student must remember to add Gina herself to the 8 friends, so there are at least 9 people at the party -- there may be more than 9 since Gina might have someone else at her home that attends the party.

5. **(43)** The perimeter is found by adding all the sides together. So 8 + 9 + 2 + 14 + 10 are added together to find 43 feet.

6. **(6)** The student needs to substitute 3 ✈'s for each ☎. So ✂✂ = 12 ✈'s. Since there are 2 ✂'s, then each ✂ is worth 6 ✈'s.

7. **($9.00)** The student should use subtraction since the cost of the game is given. The cost is taken from the total spent ($28 - $19 = $9).

8. **(65)** The student can use the number Bill picked -- 23 -- to find Joe's total since Joe picked 8 less (23 - 8 = 15). Tom picked 12 more than Joe's 15, so Tom picked 27 oranges. Adding all of these together gives 65.