Commentary

Venus, VI

1.

Less than 11	Greater than 15 less than 28	Greater than 36	Numbers that do not belong in any basket
10, 3, 2, 5	1 7, 26, 20, 19	39, 42, 48	29, 31, 34

This problem will show which students have an intuitive feel for numbers that are greater than or less than other numbers. The middle basket requires that a number meet two conditions, and this will be new to many students. A help would be to indicate the "critical numbers" 11, 15, 28, and 36 on a number line, with a basket drawn under the set of numbers that match its conditions. This will provide a visual interpretation of the problem.

2. **(2¢)** Students should have an intuitive knowledge of a dime being 10¢ and a nickel being 5¢, and the two together being 15¢. Therefore removing 13¢ from 15¢ leaves 2¢.

3. **(3, 11)** Students can subtract 4 from 7 to find the answer that belongs in the box, or they might find it simply by knowing that 3 is the number that adds to four to give seven. In either case, 3 is then added to 8, giving 11.

4. **(20 and 50)** Students might find the boxes in a number of ways. They might start with the largest, 50, then *count on* by tens for the box of 20. Or they might simply add the numbers as 5 tens plus 2 tens, getting 7 tens or 70. Or, they might use a calculator and add 20 + 50.

5. **(bottom)** Taking out three blocks, labeling them with the 3 colors, and stacking them up according to the two conditions will help students who have trouble with this problem. One possible source of difficulty is that the symbols on the blocks (6, A, and P) are arbitrary, but some students will assume they have meaning in the problem.

6. **(8)** Students can count the concentric triangles, as well as the individual ones. Some will have trouble with the triangle with a square in it, feeling that this somehow is disallowed. Or, they might count the square, not distinguishing it from a triangle.