

# Commentary

## *Mars, VIII*

1. **(b)** The given picture shows a rectangle that is one-half of the square. In (b) the half-circle is one-half of the circle. In (a) and (c), the two shapes are not similar and their areas are not in the same relationship as in the given figure. However, if students choose (a) or (c), listen to their reasons -- they might have used some other logical reason for selecting them.
2. **(The chances are the same that she'll pick either color.)** The question is designed to measure both the child's sense of probability, and their confidence. The confidence factor comes in because the question is asked in such a way that they think they should answer with one particular color.
3. **(356)** The challenge is for the student to put the place values in the correct relationship, before finding the total. Most textbooks show pictures like this, but the tens and hundreds blocks have already been placed in their correct, left-to-right order.
4. **(10)** The students can count by 20's, and get to 80 books on 4 shelves. Therefore 10 books, the difference in 80 and 90, will not have a shelf.
5. **(12 rose and 8 holly bushes)** Students might draw a picture of the nature trail, and sketch and label the five bushes at each stop. They would continue until they have 20 bushes in all, then go back and count the rose and holly bushes separately. Making a chart is another way for students to organize this information.
6. **(25)** Students might make such stacks using index cards or some other manipulative. They can then see physically why the answer is 25. This problem is a physical introduction to the concept of the *mean*.
7. **(first row: 5 4 9; second row: 10 6 2; third row: 3 8 7)** Students can begin this magic square by finding the sum along the diagonal which is complete -- 18. Then they look for rows and columns for which there is one missing number, and knowing the sum must be 18, they can find that number.
8. **(4)** Some students will not know a key fact here, which is that 1 kilogram is 1,000 grams. Once they have been reminded of this, they might think of 251 grams as 250 grams, since the problem involves an estimation. Then 250 and 250 is 500, and another 500 would be 1000. Therefore four cans of soup would be about 1000 grams, or 1 kilogram.