# Commentary
Earth, XXII

1. **(72)** This may be solved by repeated addition: 18 + 18 + 18 + 18 = 72. In later years, students will solve the problem by multiplication: 18 centimeters per side times 4 sides gives 72 centimeters.

2. **(Saie has read 1 page more.)** The student needs to first decide how many pages Saie has read. Students might take out a book, and physically go from the top of page 35 to the bottom of page 45. If so, they will count 11 pages. Munjori has only read 10 pages.

3. There are several different ways the line can be draw. Below is one solution for each figure.
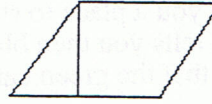
4. **(5 quarters)** His purchases total $1.08. He needs 5 quarters or $1.25 for his purchases.

5. **(1961)** You can turn the number on its head and you see the same number. It will be 6009 before this occurs again.

6. **(left-most spinner)** The probability of spinning a green is 1/2 on the left-hand spinner, and less than that on the other three. The probability of an event in this situation is related to the area of the shape labelled "G." The left-hand figure has the largest area for G. (Note: The third figure may cause concern for some students, as there is no area named G, therefore there is no chance whatsoever of landing on G.)

7. There are many solutions, but they all have in common that the smallest 3 numbers – 1, 2, and 3 – must be in the corners. It's also true that the three highest numbers – 7, 8, and 9 – must all be on different lines. These hints should help students who are having difficulty. One solution is:
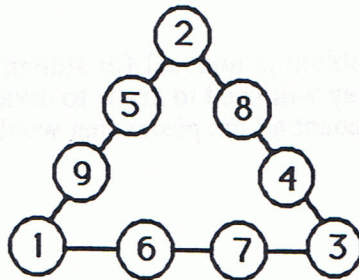
8. **(20)** The left-hand balance scale can be used to determine that each apple must weigh 10. Students will find this by guessing what each apple must weigh, and checking to see if 3 apples of that weight total 30. Once they have determined that each apple weighs 10, then the two apples on the right-hand scale must be balanced by a weight of 20.