# Commentary
Venus, V

1. **(5 dots, 3 dots, 1 dot)** The first box has 11 dots, the second has 9 dots, the third has 7 dots. The pattern is then the odd numbers, counting backward from 11.

2. **(The marked thermometers are shown to the right.)** Each line on the thermometer represents 10 degrees, although this will not be obvious to all students. They may have to be prompted to see what number they count by -- *ten* -- starting with zero, to get to 50 at the 5th count. Practice in counting by tens should help. The second thermometer requires that they realize that 65 is half way between 60 and 70. As students practice counting by tens, this can be an extension.

   (Don't expect the children's marks on the thermometer to be precise.)
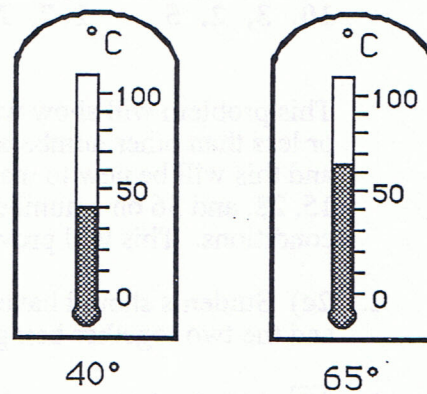
3. Students can *guess and check* with + and - to find the answer. Or, they might notice that + had to precede 6 since it's impossible to add the three previous numbers, subtract 6, and get 11. So the three numbers before 6 must turn out to be 5, once the computation is done for them. This makes the problem simpler.

$$3 \boxed{+} 4 \boxed{-} 2 \boxed{+} 6 = 11$$

4. **(2)** Fair shares is a good way for students to meet division before ever knowing how to perform the operation with numbers. The problem would be easy if the 6 cookies were grouped 2 to a plate, but here students will have to take one from both plates and give if to the middle person, to divide them fairly. They might draw lines from each child to 1 cookie, to show giving them out, then a second line.

5. **(14)** Students can actually act out a problem like this, using paper instead of crayons.

6. **(40¢)** Drawing a picture of the cards with buttons on them, till you have 12 buttons, will help students. Then they can label each card with 10¢, and count by tens to find the total.

7. **(10)** The pattern is that the white squares increase by 1 each time you move to the next figure --1, 2, 3, and so on -- and the grey squares increase by 2 each time -- 4, 6, 8, and so on. Therefore the next number of grey squares would be 10. Some students might draw the next picture, and actually count the grey squares to verify this answer. An extension of the problem would be to continue the pattern further.

8. **(a. hands, etc.; b. fingers or toes; c. hair)** The notion is for students to think about numbers that come naturally to them. Part (c) requires them to think about a large number, but one that is "real-world" to them.