Let us look back at the Hexagon Task:

Figure 1
Perimeter = 6 cm

Figure 2
Perimeter = 10 cm

Figure 3
Perimeter = 14 cm

Figure 4
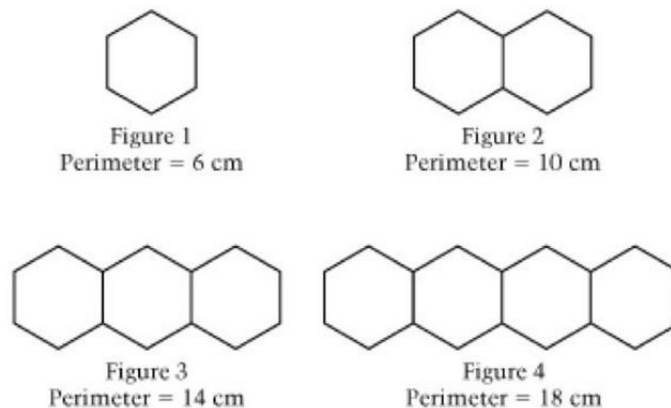Perimeter = 18 cm

There were two questions for this task:

- What is the perimeter of the 25th figure?

- Write a formula for the perimeter of the n-th figure.

1. Please work on the second question for a few minutes on your own and then discuss it with the teachers at your table. There are many ways to write a correct formula for the perimeter of the n-th figure. Compare your formula with those of others at your table. Do they look the same? If not, can you explain to each other how you arrived at your formula?

2. Now, look at the six student responses to the hexagon task. Read each response and consider what each student did well and what he or she could improve on.

   Consider the following questions about particular students' responses:

3. Student C calculated the perimeter of the 25th figure but could not translate the procedure into a formula. Write the formula that corresponds to this student's work.

4. Can you find a way to make sense of the equation written by Student D?

5. How do you interpret the equation given by Student E?

6. Student F arrived at an incorrect answer of 104cm for the perimeter of the 25th figure despite noticing (correctly) that the perimeter goes up by 4cm each time a hexagon is added. Look at the table that Student F made. What was this student's reasoning? Where does this reasoning go wrong?