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Part I: List all the "attendance questions" during the lecture, followed by your answers.

Question 1: Who was Kurt Gödel

Answer: A famous mathematician of the 20<sup>th</sup> century who worked at the Institute for Advanced Study

Question 2: What age was Carl Gauss when he came up with his formula?

Answer: In primary school

Question 3: Represent  $54 \cdot 57$  in positional notation

Answer:  $54 \cdot 57 = (5 \cdot 10 + 4 \cdot 1) \cdot (5 \cdot 10 + 7 \cdot 1) = 3 \cdot 1000 + 0 \cdot 100 + 7 \cdot 10 + 8 \cdot 1$

Part II:

1. (a) Express the number one hundred eighty two (in our usual, base ten, notation) in terms of powers of 5.

$$182 = 125 + 2 \cdot 25 + 1 \cdot 5 + 2 \cdot 1$$

$$= 1 \cdot 5^3 + 2 \cdot 5^2 + 1 \cdot 5^1 + 2 \cdot 5^0$$