

## Lecture 0: Attendance Quiz

### Part I:

① Kurt Godel was a famous mathematician who was most famous and important for the "Incompleteness Theorem" and proof, as well as other axioms.

② Gauss was 22 years old when inventing Gauss's Formula  
$$\frac{n * (n+1)}{2}$$

③ 
$$\begin{aligned} 54 * 57 &= (5 * 10 + 4 * 1) * (5 * 10 + 7 * 1) \\ &= (5 * 5 * 100) + (5 * 10 + 7 * 1) * 10 + (4 * 7) * 1 \\ &= ((2(10) + 5(1)) * 1(100)) + (5(10) * 7(1)) + (2(10) * 1(1)) \\ &\quad + (2(10) * 8(1)) \end{aligned}$$

Part II:

① a)  $182_{10}$  in base 5 =  $1(5^3) + 2(5^2) + 1(5^1) + 2(5^0)$

b)  $1212$

②  $1000001 = 1(2^6) + 1(2^0) = 65$