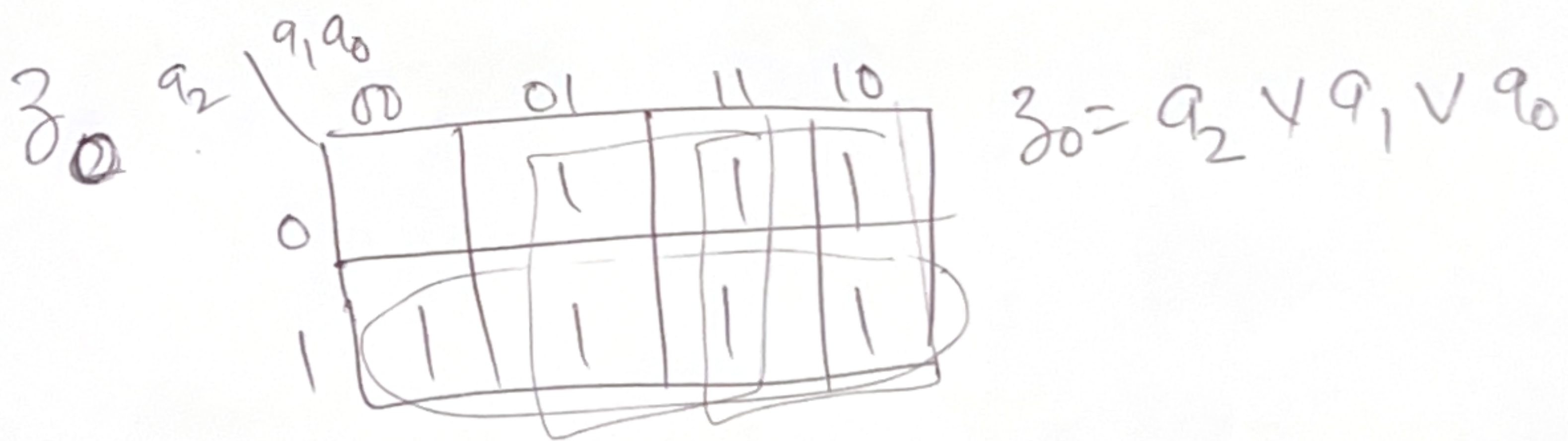
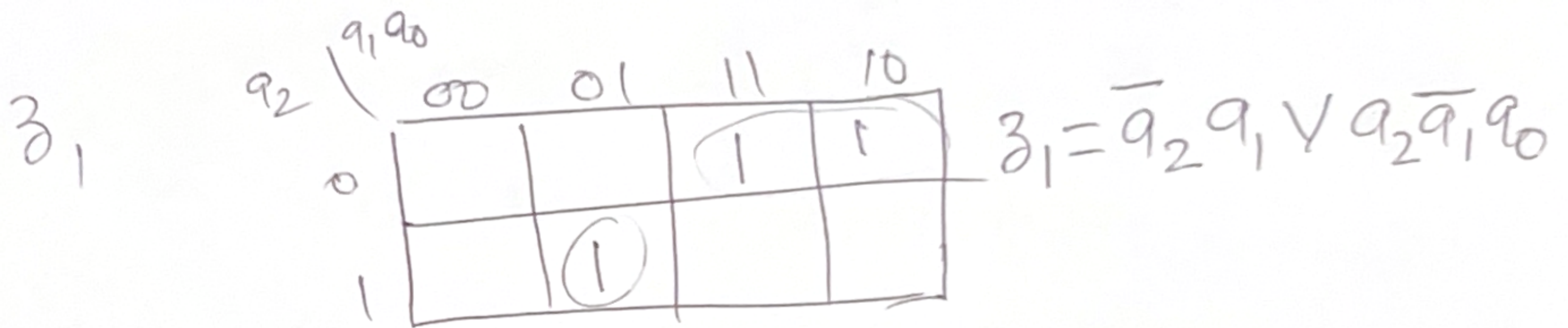
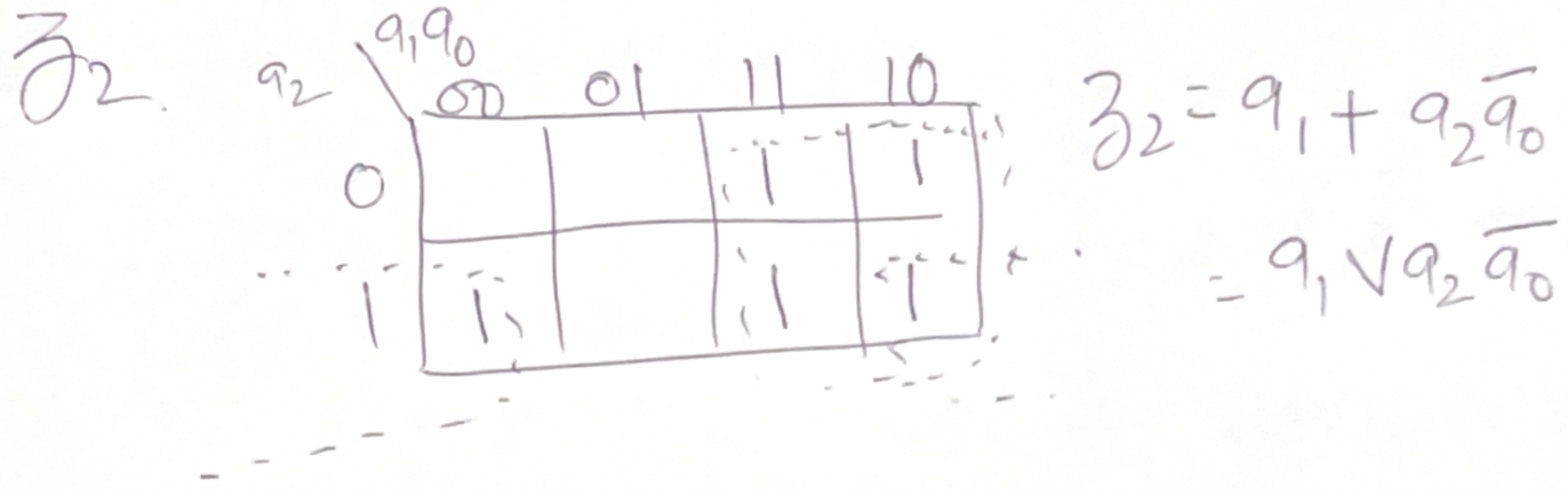
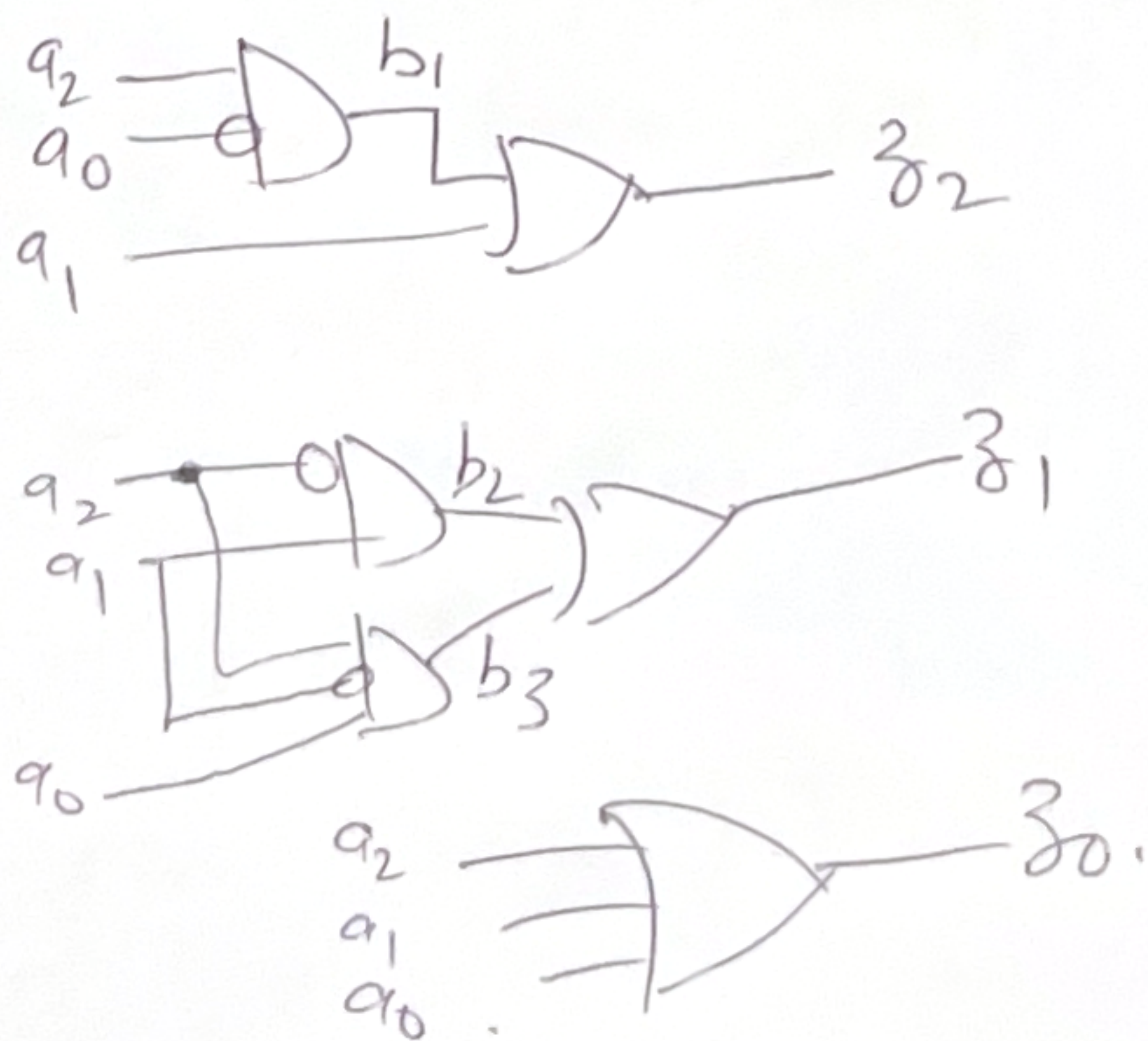


HW5 Q4. From the truth/function table, K-maps. ①



One way to implement this circuit:



The function can be interpolated. as

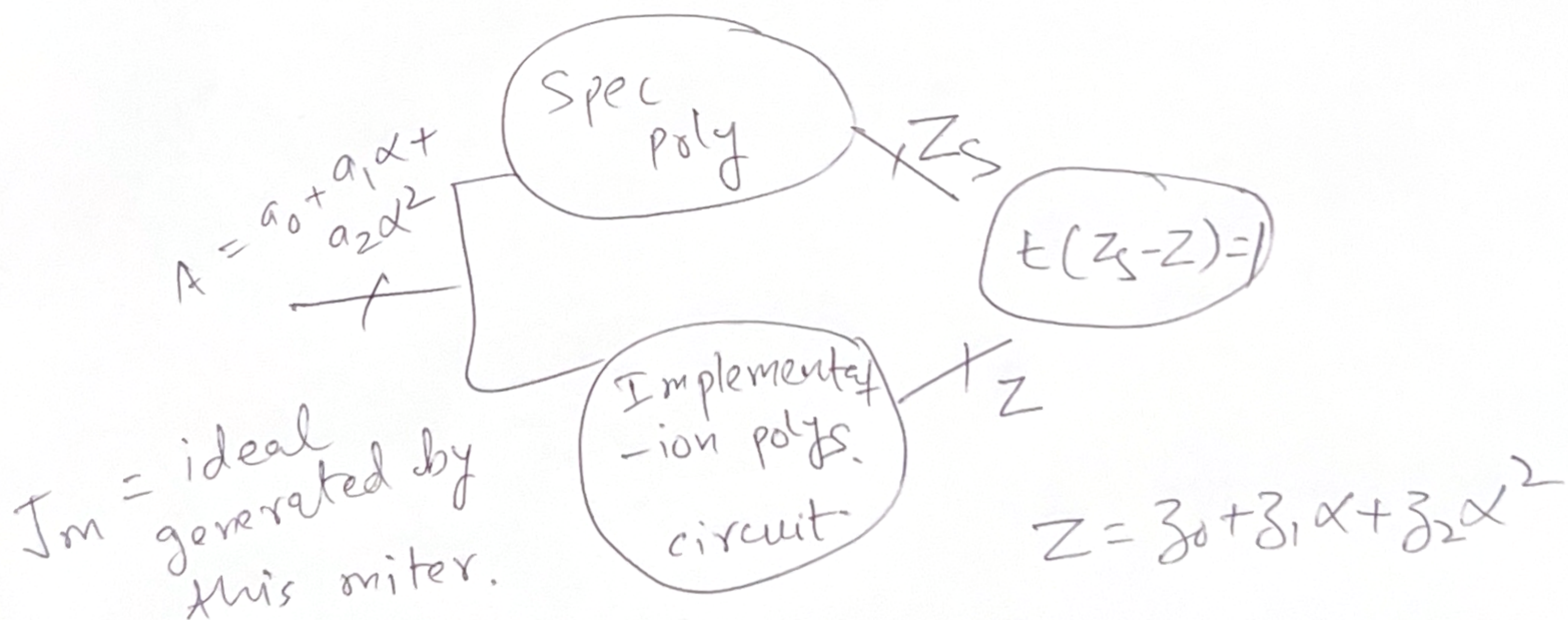
(2)

$$Z_{\text{spec}} = (\alpha^2 + \alpha + 1) \cdot A^7 + (\alpha^2 + 1) \cdot A^6 + \alpha \cdot A^5 + (\alpha + 1) \cdot A^4 + (\alpha^2 + \alpha + 1) \cdot A^3 + (\alpha^2 + 1) \cdot A \cdot \boxed{A^3 + A + 1 = 0}$$

See the singular file "hws-94-lagrange-interpolate.sing"

Now, for verification, miter the spec poly with the implementation circuit over F_2^3 with the same minpoly

$$\text{minpoly} = \underline{A^3 + A + 1}.$$



Compute

$$GB(I_m + I_s) = \{1\}?$$

for verification see Singular file "hws-94-miter.sing"