

$$S_0 = a_0 \oplus b_0 = a_0 * \bar{b}_0 \vee \bar{a}_0 * b_0;$$

$$p_0 = a_0 * b_0;$$

$$S_1 = (a_1 \oplus b_1) \oplus p_0 = \dots =$$

$$= \bar{a}_0 * a_1 * \bar{b}_1 \vee a_1 * \bar{b}_0 * \bar{b}_1 \vee \bar{a}_0 * a_1 * b_1 \vee \bar{a}_1 * \bar{b}_0 * b_1 \vee a_0 * \bar{a}_1 * b_0 * \bar{b}_1 \vee a_0 * a_1 * b_0 * b_1;$$

$$p_1 = a_1 * b_1 \vee (a_1 \vee b_1) * p_0 = a_1 * b_1 \vee a_0 * a_1 * b_0 \vee a_0 * b_0 * b_1;$$

$$S_2 = (a_2 \oplus b_2) \oplus p_1 = \dots = (a_2 * \bar{b}_2 \vee \bar{a}_2 * b_2) * \bar{p}_1 \vee (\bar{a}_2 * \bar{b}_2 \vee a_2 * b_2) * p_1 = \dots =$$

$$= \bar{a}_0 * a_2 * \bar{b}_1 * \bar{b}_2 \vee \bar{a}_0 * a_2 * \bar{b}_1 * b_2 \vee \bar{a}_0 * \bar{a}_1 * a_2 * \bar{b}_2 \vee \bar{a}_0 * \bar{a}_1 * a_2 * b_2 \vee \bar{a}_1 * a_2 * \bar{b}_0 * \bar{b}_2 \vee \bar{a}_1 * a_2 * \bar{b}_0 * b_2 \vee \bar{a}_1 * a_2 * \bar{b}_1 * \bar{b}_2 \vee \bar{a}_1 * a_2 * \bar{b}_1 * b_2 \vee a_2 * \bar{b}_0 * \bar{b}_1 * \bar{b}_2 \vee a_2 * \bar{b}_0 * \bar{b}_1 * b_2 \vee a_2 * \bar{b}_0 * \bar{b}_1 * \bar{b}_2 \vee a_2 * \bar{b}_0 * \bar{b}_1 * b_2 \vee a_1 * \bar{a}_2 * b_1 * \bar{b}_2 \vee a_1 * \bar{a}_2 * b_1 * b_2 \vee a_0 * a_1 * \bar{a}_2 * b_0 * \bar{b}_2 \vee a_0 * a_1 * \bar{a}_2 * b_0 * b_2 \vee a_0 * a_2 * \bar{b}_0 * b_1 * \bar{b}_2 \vee a_0 * a_2 * \bar{b}_0 * b_1 * b_2;$$

$$p_2 = a_2 * b_2 \vee (a_2 \vee b_2) * p_1 =$$

$$= a_2 * b_2 \vee a_1 * a_2 * b_1 \vee a_0 * a_1 * a_2 * b_0 \vee a_0 * a_2 * b_0 * b_1 \vee a_1 * b_1 * b_2 \vee a_0 * a_1 * b_0 * b_2 \vee a_0 * b_0 * b_1 * b_2;$$

$$S_3 = (a_3 \oplus b_3) \oplus p_2 = \dots = (a_3 * \bar{b}_3 \vee \bar{a}_3 * b_3) * \bar{p}_2 \vee (\bar{a}_3 * \bar{b}_3 \vee a_3 * b_3) * p_2 = \dots$$

$$p_3 = a_3 * b_3 \vee (a_3 \vee b_3) * p_2 = \dots$$

...

$$S_i = (a_i \oplus b_i) \oplus p_{i-1} = \dots$$

$$p_i = a_i * b_i \vee (a_i \vee b_i) * p_{i-1} = \dots$$