

$$Z_1 = \overline{AB}$$

$$Z_2 = \overline{(\overline{AB} \cdot A)}$$

$$= (\overline{\overline{AB}} + \overline{A}) = AB + \overline{A}$$

$$Z_3 = AB + \overline{B} \quad (\text{同上})$$

$$Z_4 = \overline{(AB + \overline{A})(AB + \overline{B})}$$

$$= \overline{(AB + \overline{A}) + (AB + \overline{B})}$$

$$= \overline{(\overline{AB} \cdot A) + (\overline{AB} \cdot \overline{B})}$$

$$= \overline{(\overline{A} + \overline{B}) \cdot A + (\overline{A} + \overline{B}) \cdot \overline{B}}$$

$$= \overline{(\overline{A}A + \overline{B}A) + (\overline{A}\overline{B} + \overline{B}\overline{B})}$$

$$= \overline{\overline{A}\overline{B} + \overline{B}A}$$

异或关系

