

hw5

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1 Q9.9

(1)

$$Cube_2(12) = 12 \text{ xor bin}(0100) = 8$$

$$\sigma(8) = 8 \ll 1 = 16$$

$$\beta(9) = 24$$

$$PM2I_{+3}(28) = (28 + 8) \bmod 32 = 4$$

$$Cube_0(\sigma(4)) = 8 + 1 = 9$$

$$\sigma(Cube_0(18)) = (\text{uint5}_t)19 \ll 1 = 7$$

(2) 网络直径为 $2n - 1 = 9$, 由 $\text{bin}(00101)$ 到 $\text{bin}(00111)$, 依次经过6步:

$00101 \rightarrow 01010 \rightarrow 10100 \rightarrow 01001 \rightarrow 10010 \rightarrow 10011 \rightarrow 00111$

(3) 网络直径为3, 结点度为9, 与2号距离最远的是13, 15, 21, 23。

2 Q9.13

能.

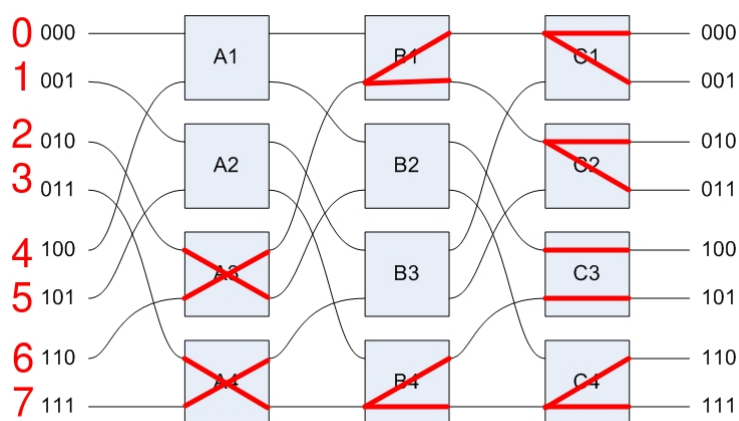


Figure 1: 开关状态图