

5. 12-18. 20.

12. 解: 1) $\text{int } a0 = 0, a1 = 0, a2, a3, a4 = 10000;$

do { $a3 = a0 + 2;$

$a2 = a1 \% a3;$

if ($a2 == a0$)

Code A;

$a3 = a0 + 1;$

$a2 = a1 \% a3;$

if ($a2 == a0$)

Code B;

$a1 = a1 + 1; \}$ while ($a1 != a4$).

2) $B1: B2: B3 = (10000 - \frac{10000}{2}) : (10000 - \frac{10000}{5}) : 9999.$

$= 5000 : 8000 : 9999.$

3) 由题, 只有 B_3 向前跳

$\Rightarrow \eta_{B1} = 0.5, \eta_{B2} = 0.2, \eta_{B3} = 99.99\%.$

- 13. 解: 1) $K_{\min} = 2.$

2) $N_{\min} = 2.$

3) $\eta_{B1} = 0.5, \eta_{B2} = 0.2, \eta_{B3} = 99.99\%.$

4. $1d_{B1} = 1, 1d_{B2} = 4$

$1d_{B1} < 1d_{B2} \Rightarrow 1d_{\min} = 1d_{B1} = 1.$



15. $M_{\min} = 3 \times 4 = 12$?

16 解: $\eta_A = \frac{P-1}{P} \cdot \frac{Q-2}{Q}$

$$\eta_B = \begin{cases} 1, & P < Q \\ \frac{Q}{P}, & P > Q \end{cases} \quad \text{①}$$

①: $\frac{P-1}{P} \cdot \frac{Q-2}{Q} > 1$
 $(1 - \frac{1}{P})(1 - \frac{2}{Q}) > 1$ $Q > 2$

$$(1 - \frac{1}{P}) > \frac{1}{1 - \frac{2}{Q}}$$

$$1 - \frac{1}{1 - \frac{2}{Q}} > P$$

$$\Rightarrow P < 1 - \frac{1}{1 - \frac{2}{Q}} \quad \& \quad P < Q$$

②: $\frac{P-1}{Q} \cdot \frac{Q-2}{Q} > \frac{Q}{Q}$
 $P > \frac{Q^2}{Q-2} + 1$

17. (1) (1,0) (0,1) . ② $\Rightarrow 2 \times 4 = 8$?

(2)



18. 可能由于采用了乱序执行技术, 重排了指令的执行顺序; 也可能跟指令自身所需周期数有关. 使用记分牌可以处理此情况.
一般有一种 标识-识别-堆栈保存-处理的程序进行处理.

20. 解:

