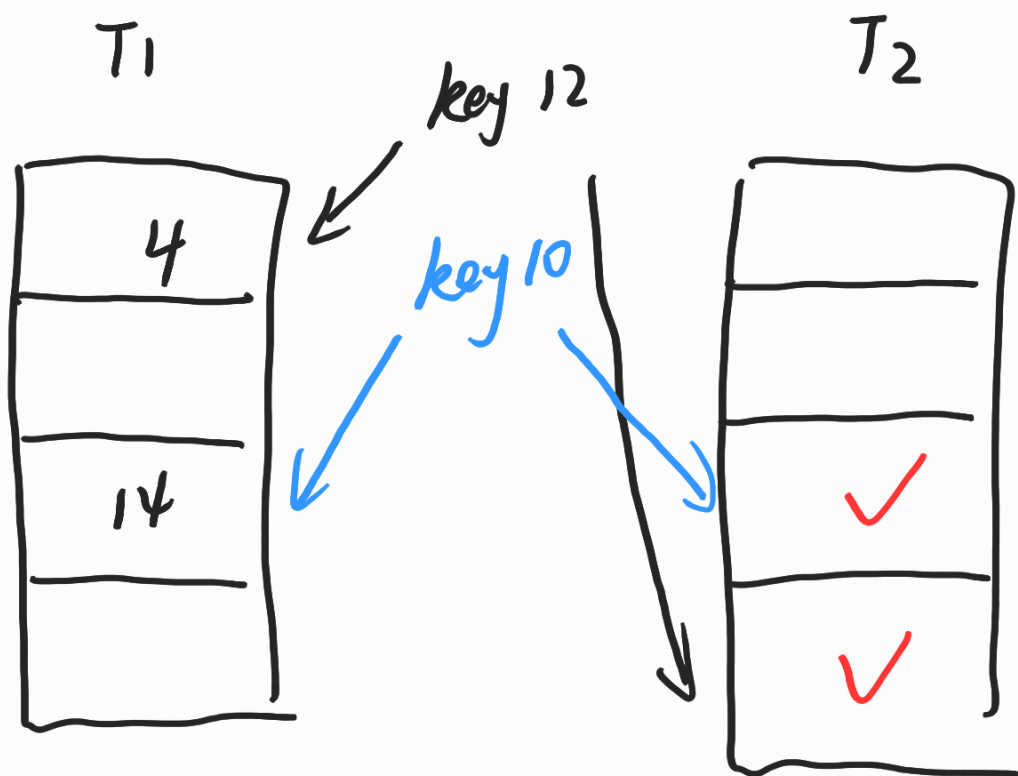


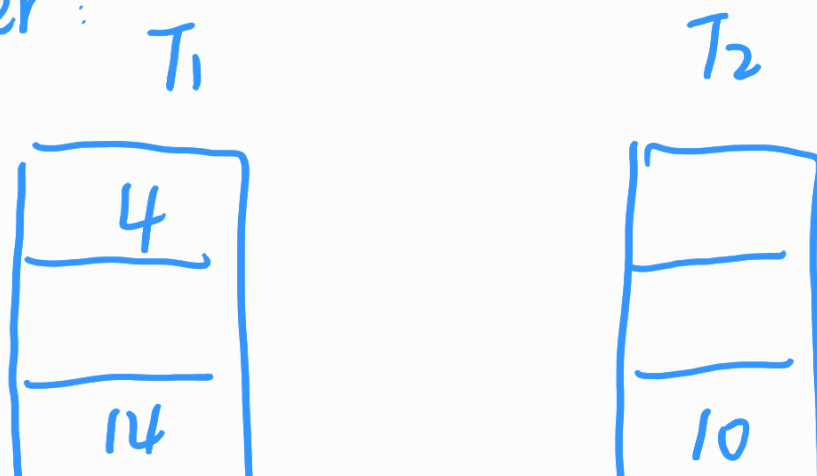
# Question 1 Cuckoo Hashing

(a) Insert keys 12 and 10

	$h_1(\text{key})$	$h_2(\text{key})$
key 12 : 0b 11 00	0	3
key 10 : 0b 10 10	2	2

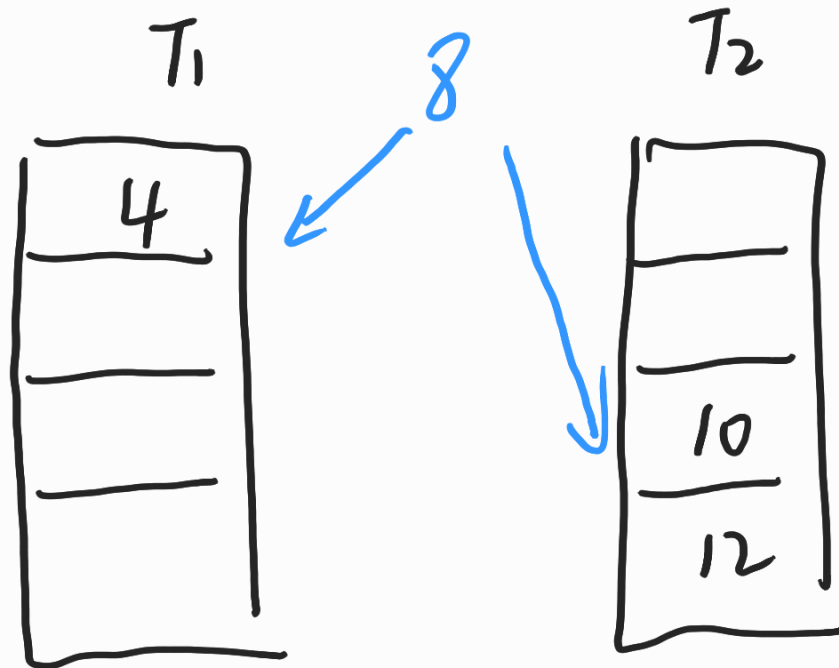


answer :





(b) delete 14 , insert 18



choose it.  
(因为等于4)

$$8 = 0b\ 1000$$

$$h_1(8) = 0$$

$$h_2(8) = 2$$

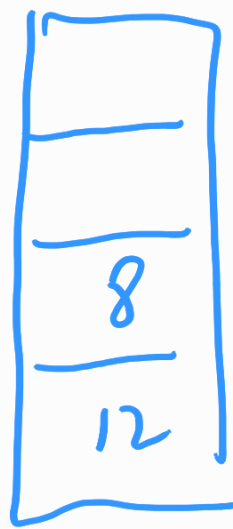
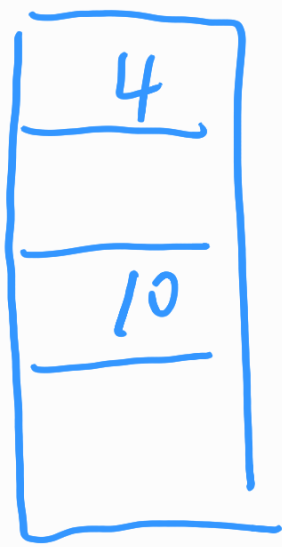
$$h_1(10) = 2$$

move 10 to  $T_1[2]$

answer =

$T_1$

$T_2$

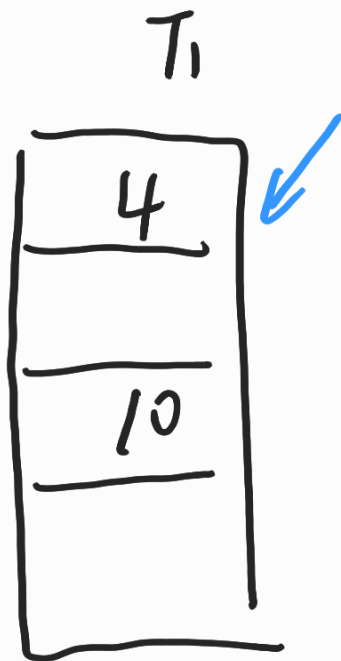


(c) : insert 28

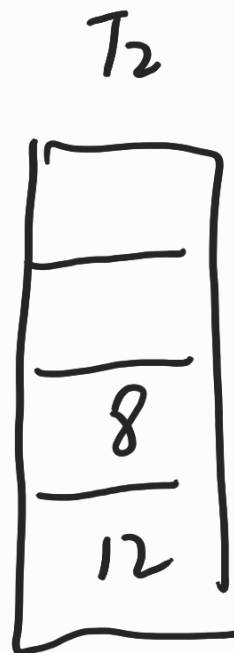
$$28 = 0b\ 11100$$

$$h_1(28) = 0$$

$$h_2(28) = 3$$



28



choose it!

$$h_1(12) = 0$$

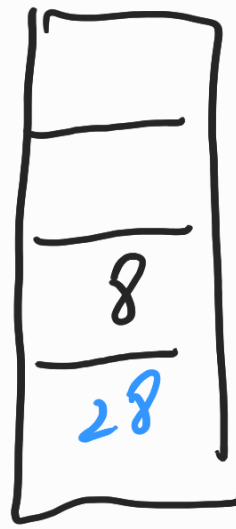
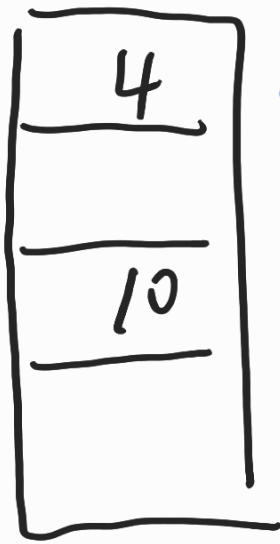
$$h_2(12) = 3$$

$T_1$

12

$T_2$

choose it

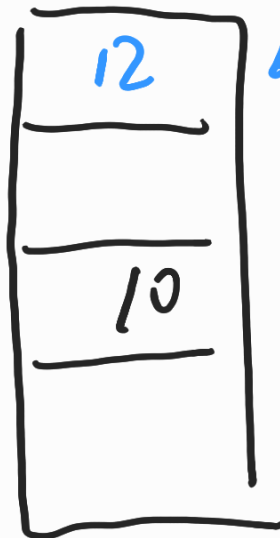


Ob 100

$$h_1(4) = 0$$

$$h_2(4) = 1$$

$T_1$



4

$T_2$



answer:

$T_1$



$T_2$



10

4
8
28

(d) :

Answer: Insert  $key = 6$  会对 (c) 中的  $T_1$   $T_2$  造成无限循环调整.