

- Given  $N$  = num of 1s  
 - Return all possible times  
 - order doesn't matter  
 - format: 3:07

32 16 8 4 2 1

0011 Hour 3  
 01100 Minute 25

$N = 1$

0001 1:00 3:00 5:00 9:00  
 000000 1:01 1:02 1:04  
 1:08 1:16 1:32  
 0010 2:00 6:00 10:00 2:01  
 0100 4:00 2:02 2:04 2:08  
 1000 8:00 2:16 2:32

0000 0:01 0:03 0:05 0:09  
 000001 0:17 0:33

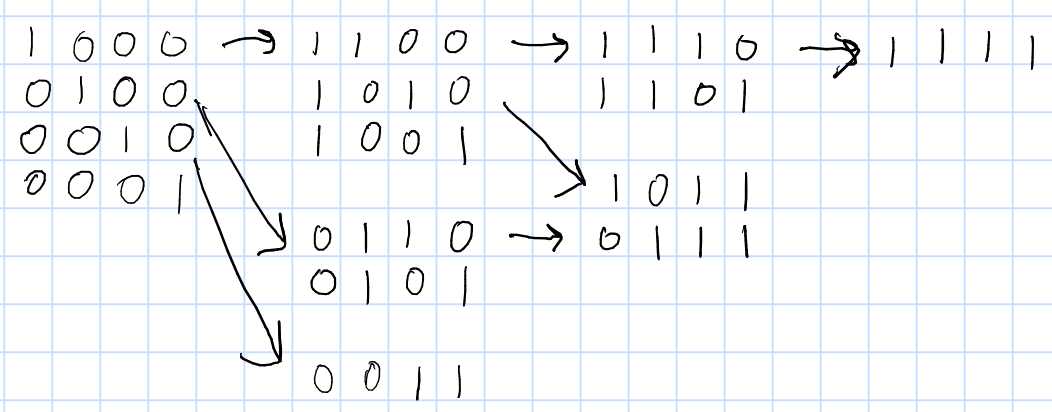
000010 0:02  
 000100 0:04  
 001000 0:08  
 010000 0:16 0:48  
 100000 0:32

$N = 2$

0011  
 0101  
 1001

0001  
 000001

0000



$N = 0$

1100 1  
 1010 2  
 1001 3

$N = 1$

1000 1  
 0100 2  
 0010 3  
 0001 3

$N = 2$

- Start with all positions set to 0
- if  $N > 0$ 
  - backtrack with each position set to 1
  - decrement  $N$  by 1
  - increment starting index by 1

$N = 1$

1

2

4

8

$N = 2$

12 14 18 24 28 48

$N = 3$

124 128 148 248

0011  
 0101  
 1001  
 0010 0110  
 1010  
 0100 1100  
 1000