

401. Binary Watch

题目描述: <https://leetcode.com/problems/binary-watch/>

4位数代表小时，6位数代表分钟。求给定1的个数，有多少种事件组合。

例如：

```
Input: n = 1
```

```
Return: ["1:00", "2:00", "4:00", "8:00", "0:01", "0:02", "0:04", "0:08", "0:16", "0:32"]
```

解题思路：

subset模式~，注意不要算重复了。。

代码：

```

class Solution {
public:
    vector<string> readBinaryWatch(int num) {
        vector<string> res;
        for(int i = 0; i <= num && i <= 4; i++) {
            int h = 0, m = 0;
            vector<int> tmp1;
            GetTime(tmp1, h, 0, i, 4);
            vector<int> tmp2;
            GetTime(tmp2, m, 0, num - i, 6);
            for(auto hour: tmp1) {
                for(auto minute: tmp2) {
                    string s = to_string(hour) + ":";
                    if(minute < 10) {
                        s = s + "0";
                    }
                    s = s + to_string(minute);
                    res.push_back(s);
                }
            }
        }
        return res;
    }
    void GetTime(vector<int> &res, int s, int pos, int n, int limit) {
        if(n == 0) {
            if(limit == 4 && s < 12) {
                res.push_back(s);
            }
            if(limit == 6 && s < 60) {
                res.push_back(s);
            }
            return;
        }
        for(int i = pos; i < limit; i++) {
            GetTime(res, s+pow(2,i), i+1, n-1, limit);
        }
    }
};

```