

# Assignment #2: 语法练习

2024 fall, Compiled by ==物理学院24本吴诚舟==

## 1. 题目

### 263A. Beautiful Matrix

<https://codeforces.com/problemset/problem/263/A>

代码

```
matrix = []
row = 0
col = 0
for i in range(5):
    alist = list(map(int, input().split()))
    matrix.append(alist)
    if 1 in alist:
        row = i + 1
        col = alist.index(1) + 1
result = abs(3-row) + abs(3-col)
print(result)
```

代码运行截图 == (至少包含有"Accepted") ==

PROBLEMS SUBMIT CODE MY SUBMISSIONS STATUS HACKS ROOM STANDINGS CUSTOM INVOCATION

General

| #         | Author              | Problem  | Lang        | Verdict  | Time      | Memory | Sent                       | Judged                     |   |         |
|-----------|---------------------|----------|-------------|----------|-----------|--------|----------------------------|----------------------------|---|---------|
| 278330811 | Practice:<br>czwuuu | 263A - 8 | Python<br>3 | Accepted | 124<br>ms | 12 KB  | 2024-08-<br>27<br>06:42:17 | 2024-08-<br>27<br>06:42:17 | ★ | Compare |

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```
matrix = []
row = 0
col = 0
for i in range(5):
    alist = list(map(int, input().split()))
    matrix.append(alist)
    if 1 in alist:
        row = i + 1
        col = alist.index(1) + 1
result = abs(3-row) + abs(3-col)
print(result)
```

[Click](#) to see test details

### 1328A. Divisibility Problem

<https://codeforces.com/problemset/problem/1328/A>

代码

```
from math import ceil

t = int(input())
ans = [0]*t
for i in range(t):
```

```

x, y = map(int, input().split())
if x <= y:
    ans[i] = y-x
else:
    n = ceil(x/y)
    ans[i] = n*y - x
for i in range(t):
    print(ans[i])

```

代码运行截图 == (至少包含有"Accepted") ==

PROBLEMS SUBMIT CODE MY SUBMISSIONS STATUS HACKS STANDINGS CUSTOM INVOCATION

General

| #         | Author              | Problem                    | Lang        | Verdict  | Time  | Memory | Sent                   | Judged                 |   |         |
|-----------|---------------------|----------------------------|-------------|----------|-------|--------|------------------------|------------------------|---|---------|
| 278337033 | Practice:<br>czwuuu | <a href="#">1328A</a> - 12 | Python<br>3 | Accepted | 93 ms | 16 KB  | 2024-08-27<br>08:21:17 | 2024-08-27<br>08:21:17 | ★ | Compare |

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```

from math import ceil
t = int(input())
ans = [0]*t
for i in range(t):
    x, y = map(int, input().split())
    if x <= y:
        ans[i] = y-x
    else:
        n = ceil(x/y)
        ans[i] = n*y - x
for i in range(t):
    print(ans[i])

```

## 427A. Police Recruits

<https://codeforces.com/problemset/problem/427/A>

代码

```

n = int(input())
crime_and_recruit = list(map(int, input().split()))
police = 0
untreated = 0
for i in range(n):
    if crime_and_recruit[i] != -1:
        if police < 0:
            police = 0
        police += crime_and_recruit[i]
    else:
        police -= 1
        if police < 0:
            untreated += 1
print(int(untreated))

```

代码运行截图 == (AC代码截图, 至少包含有"Accepted") ==

PROBLEMS SUBMIT CODE MY SUBMISSIONS STATUS HACKS ROOM STANDINGS CUSTOM INVOCATION

General

| #         | Author           | Problem                   | Lang     | Verdict  | Time   | Memory  | Sent                | Judged              |  |                         |
|-----------|------------------|---------------------------|----------|----------|--------|---------|---------------------|---------------------|--|-------------------------|
| 278370133 | Practice: czwuuu | <a href="#">427A</a> - 21 | Python 3 | Accepted | 108 ms | 8972 KB | 2024-08-27 13:38:40 | 2024-08-27 13:38:40 |  | <a href="#">Compare</a> |

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Copy

```
n = int(input())
crime_and_recruit = list(map(int, input().split()))
police = 0
untreated = 0
for i in range(n):
    if crime_and_recruit[i] != -1:
        if police < 0:
            police = 0
            police += crime_and_recruit[i]
        else:
            police -= 1
            if police < 0:
                untreated += 1
print(int(untreated))
```

02808: 校门外的树

<http://cs101.openjudge.cn/practice/02808/>

代码

```
L, M = map(int, input().split())
trees = [1]*(L+1)
for _ in range(M):
    start, end = map(int, input().split())
    trees[start:end+1] = [0]*(end-start+1)
result = sum(trees)
print(result)
```

代码运行截图 == (AC代码截图，至少包含有"Accepted") ==

#46004291提交状态

查看 提交 统计 提问

状态: Accepted

源代码

```
L, M = map(int, input().split())
trees = [1]*(L+1)
for _ in range(M):
    start, end = map(int, input().split())
    trees[start:end+1] = [0]*(end-start+1)
result = sum(trees)
print(result)
```

基本信息

#: 46004291

题目: 02808

提交人: wcz

内存: 3792kB

时间: 22ms

语言: Python3

提交时间: 2024-09-05 09:28:55

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English 帮助 关于

sy60: 水仙花数II

<https://sunnywhy.com/sfbj/3/1/60>

代码

```
def check(n):
    a = n // 100
    b = (n-a*100) // 10
    c = n - a*100 - b*10
    res = a**3 + b**3 + c**3
```

```
    if res == n:
        return True
    else:
        return False

a, b = map(int, input().split())
ans = []
for n in range(a, b+1):
    if check(n):
        ans.append(n)

if ans:
    print(' '.join(map(str, ans)))
else:
    print('NO')
```

代码运行截图 == (AC代码截图, 至少包含有"Accepted") ==

代码书写

Python

```
1  def check(n):
2      a = n // 100
3      b = (n-a*100) // 10
4      c = n - a*100 - b*10
5      res = a**3 + b**3 + c**3
6      if res == n:
7          return True
8      else:
9          return False
10
11 a, b = map(int, input().split())
12 ans = []
13 for n in range(a, b+1):
14     if check(n):
15         ans.append(n)
16
17 if ans:
18     print(' '.join(map(str, ans)))
19 else:
20     print('NO')
```

测试输入

提交结果

历史提交

| 提交时间                | 结果   | 时长(ms) | 语言     |                    |
|---------------------|------|--------|--------|--------------------|
| 2024-09-24 14:31:08 | 完美通过 | 0      | Python | <a href="#">查看</a> |
| 2024-09-23 08:14:07 | 完美通过 | 0      | Python | <a href="#">查看</a> |

# 01922: Ride to School

<http://cs101.openjudge.cn/practice/01922/>

## 代码

```
from math import ceil

answers = []
while True:
    N = int(input())
    if N == 0:
        break
    else:
        ans = float('inf')
        for i in range(N):
            v, t = map(int, input().split())
            if t >= 0:
                arrival_t = ceil(t + 4.5*3600/v)
                if arrival_t < ans:
                    ans = arrival_t
            answers.append(ans)
for i in range(len(answers)):
    print(answers[i])
```

代码运行截图 == (AC代码截图, 至少包含有"Accepted") ==

#46191495提交状态

[查看](#) [提交](#) [统计](#) [提问](#)

状态: **Accepted**

源代码

```
from math import ceil

answers = []
while True:
    N = int(input())
    if N == 0:
        break
    else:
        ans = float('inf')
        for i in range(N):
            v, t = map(int, input().split())
            if t >= 0:
                arrival_t = ceil(t + 4.5*3600/v)
                if arrival_t < ans:
                    ans = arrival_t
            answers.append(ans)
for i in range(len(answers)):
    print(answers[i])
```

基本信息

#: 46191495  
题目: 01922  
提交人: wcz  
内存: 3572kB  
时间: 40ms  
语言: Python3  
提交时间: 2024-09-24 18:33:09

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[English](#) [帮助](#) [关于](#)

## 2. 学习总结和收获

普遍比较简单。但是最后一道题有收获。一个是知道了无穷大的表示方法。还有其实一开始没想出怎么做（没想到只要比较每个rider到达时间就行），后来看了课程群里同学的代码才恍然大悟。

每日选做在跟进（p.s. 难度E是Easy吗（doge

