1.

将单位圆按d均分为n个面积相等的圆环，设第i个圆环的内径为a_i，外径为a_{i+1}，$i=0,2,\cdots,n-1$，则有$a_0=0$, $\pi(a_{i+1}^2-a_i^2)=\frac{\pi}{n}$ 得 $a_{i+1}=\sqrt{a_i^2+\frac{1}{n}}$ 所以 $a_i=\sqrt{\frac{i}{n}}$ 可以将d分为n个区间$(a_i,a_{i+1}](i=0,2,\cdots,n-1)$，其中 $i<d^2n\leq i+1$

算法如下：

```
n = A.length
for i = 1 to n
    k = ⌊d*d*n⌋-1
    do insert A[i] into list B[k]
for i = 0 to n – 1
    do sort list B[i] with insertion sort
    concatenate the lists B[0], B[1], ..., B[n – 1] together in order
```

2.

算法如下：

```
let r[0..n] be a new array
r[0] = 0
for j = 1 to n
    q = –∞
    for i = 1 to j
        q = max(q, p[i] + r[j – i] - c)
        r[j] = q
return r[n]
```