4.枚举算法

1、枚举n到m之间的所有质数

2、枚举字符

```
#include <iostream>
#include <ctime>
#include <string>
#include <algorithm>
using namespace std;

int main()
{
    srand(time(NULL));
    char s[10];
    for (int i = 0; i < 10; i++)
    {
        s[i] = (char)(65 + rand() % 26);
        printf("%c",s[i]);
    }
    printf("\n");
    for(int i = 0; i < 10; i++)
    {
        for (int j = 0; j < 26; j++)
        {
            if(s[i] == (char)(65+j))
            {
                cout << (char)(65+j);
                break;
            }
        }
    }
    return 0;
}
```

3、回文数字

4、生日蜡烛

```
int main()
{
  for (int i = 1; i <= 200; i++)
  {
```

```
    int can = 0, j = i;
    while (can < 236 && j <= 200)
    {
      can+= j;
      j++;
    }
    if (can == 236)
      cout << i << endl;
  }
}
```

5、最大子阵

6、四平方和

```
int main()
{
  int N;
  cin >> N;
  for (int a = 0; a*a <= N; a++)
  {
    for (int b = a; a*a+b*b <= N;b++)
    {
      for (int c = b; a*a +b*b +c*c <= N;c++)
      {
        d = sqrt(N-a*a-b*b-c*c);
        if (a*a +b*b+ c*c + d*d  == N)
        {
          cout << a << " " <<b " " <<c <<" " <<d<<endl;
          return 0;
         }
      }
    }
  }
  return 0;
}
```

7、装饰效果（dp）

8、双节棍（dp）