

VÍ DỤ TEST

Phương pháp Xuống thang tìm trị riêng trội tiếp theo

TH1: Trị riêng trội đơn thực

Input:

```
4
9 0 0 0
0 7 0 0
0 0 4 0
0 0 0 1
```

Output:

```
Day la TH: 1
So lan lap la m = 50
Day vecto tinh duoc
9.000000 81.000000 1.000000 1.000000 1.000000 1.000000 1.000000 1.000000 1.000000 1.000000 1.000000
7.000000 49.000000 0.470508 0.365950 0.284628 0.221377 0.172182 0.133920 0.104160 0.081013 0.063010
4.000000 16.000000 0.087791 0.039018 0.017342 0.007707 0.003425 0.001522 0.000677 0.000301 0.000134
1.000000 1.000000 0.001372 0.000152 0.000017 0.000002 0.000000 0.000000 0.000000 0.000000 0.000000
Gia tri rieng thu 1 la: 9.0000000000
Vector rieng tuong ung la:
1.0000000000
0.0000034896
0.0000000000
0.0000000000

Day la TH: 1
So lan lap la m = 25
Day vecto tinh duoc
0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000
7.000000 49.000000 1.000000 1.000000 1.000000 1.000000 1.000000 1.000000 1.000000 1.000000 1.000000
4.000000 16.000000 0.186589 0.106622 0.060927 0.034815 0.019895 0.011368 0.006496 0.003712 0.002121
1.000000 1.000000 0.002915 0.000416 0.000059 0.000008 0.000001 0.000000 0.000000 0.000000 0.000000
Gia tri rieng thu 2 la: 7.0000000000
Vector rieng tuong ung la:
0.0000000000
1.0000000000
0.0000008396
0.0000000000

Day la TH: 1
So lan lap la m = 11
Day vecto tinh duoc
0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000
0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000
4.000000 16.000000 1.000000 1.000000 1.000000 1.000000 1.000000 1.000000 1.000000 1.000000 1.000000
1.000000 1.000000 0.015625 0.003906 0.000977 0.000244 0.000061 0.000015 0.000004 0.000001 0.000000
Gia tri rieng thu 3 la: 4.0000000000
Vector rieng tuong ung la:
0.0000000000
0.0000000000
1.0000000000
0.0000002384
```

```

Day la TH: 1
So lan lap la m = 3
Day vecto tinh duoc
0.000000 0.000000 0.000000
0.000000 0.000000 0.000000
0.000000 0.000000 0.000000
1.000000 1.000000 1.000000
Gia tri rieng thu 4 la: 1.0000000000
Vector rieng tuong ung la:
0.0000000000
0.0000000000
0.0000000000
1.0000000000

```

TH2: Trị riêng trội đơn, thực, trái dấu

TH3: Trị riêng trội phức, liên hợp

Input:

```

4
-8 4 4 4
-7 -5 -2 -1
0 -1 -3 -2
-1 0 -1 0

```

Output:

```

Day la TH: 3
So lan lap la m = 101
Day vecto tinh duoc
4.000000-124.000000 1.000000 -0.801074 0.182231 0.502311 -1.000000 1.000000 -0.573313
-1.000000 61.000000 0.349856 -1.000000 1.000000 -1.000000 0.217802 0.582632 -1.000000
-0.142948 37.000000 -0.126437 -0.011163 0.115321 -0.227491 0.194624 -0.077798 -0.052659
0.142049 2.000000 0.062500 -0.102065 0.075684 -0.045207 -0.030169 0.084518 -0.093700

Tri rieng thu 1 la: -0.536547 + 0.911780i
vector rieng tuong ung la:
-58.058041 - 1.715214i
-36.579452 - 0.245187i
-2.417901 - -0.243644i
0.160722 - 0.093704i

Tri rieng thu 2 la: -0.536547 - 0.911780i
vector rieng tuong ung la:
-58.0580414542 + 1.7152138484i
-36.5794522050 + 0.2451868001i
-2.4179012195 + -0.2436437998i
0.1607222985 + 0.0937039417i

```