

```

1  #include<iostream>
2  #include<iomanip>
3  using namespace std;
4  int m, n;
5  char a[100][100];
6  void ruin(char (&a)[100][100], int i, int j)
7  {
8      a[i][j] = '#';
9      if(a[i+1][j]=='-' && i+1<m)
10     {
11         ruin(a,i+1,j);
12     }
13     if(a[i][j+1]=='-' && j+1<n)
14     {
15         ruin(a,i,j+1);
16     }
17     if(a[i-1][j]=='-' && i-1>0)
18     {
19         ruin(a,i-1,j);
20     }
21     if(a[i][j-1]=='-' && j-1>0)
22     {
23         ruin(a,i,j-1);
24     }
25     return;
26 }
27
28 int main()
29 {
30     int t,people, rooms;
31     char temp;
32     cin >> t;
33     while(t-->0)
34     {
35         cin >> m >> n;
36
37         people = 0;
38         rooms = 0;
39         for(int i=0; i<m; i++)
40         {
41             for(int j=0; j<n; j++)
42             {
43                 cin >> temp;
44                 if(temp=='*')
45                 {
46                     people++;
47                     a[i][j] = '-';
48                 }
49                 else
50                     a[i][j] = temp;
51             }
52         }
53
54         for(int i=1; i<m-1; i++)
55         {
56             for(int j=1; j<n-1; j++)
57             {
58                 if(a[i][j]=='-')
59                 {
60                     rooms++;
61                     ruin(a,i,j);

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62         }
63     }
64 }
65 cout << fixed << setprecision(2) << (people/(float)rooms) << "\n";
66 }
67 }
```