**#include<cstdio>**

**#include<algorithm>**

**#include<cmath>**

**#define MaxN 11**

**using namespace std;**

**int N,Big;**

**double map[MaxN][MaxN],tmp[MaxN][MaxN];**

**void Init()**

**{**

**scanf("%d",&N);**

**for (int i=0;i<=N;i++)**

**for (int j=0;j<N;j++)**

**scanf("%lf",&tmp[i][j]);**

**for (int i=0;i<N;i++)**

**for (int j=0;j<N;j++)**

**{**

**map[i][j]=2.00\*(tmp[0][j]-tmp[i+1][j]);**

**map[i][N]+=tmp[0][j]\*tmp[0][j]-tmp[i+1][j]\*tmp[i+1][j];**

**}**

**}**

**void Print()**

**{**

**for (int i=0;i<=N-2;i++)**

**printf("%.3lf ",map[i][N]);**

**printf("%.3lf\n",map[N-1][N]);**

**}**

**void Gauss() {**

**for (int i=0;i<N;i++) {**

**int Big=i;**

**for (int j=i+1;j<N;j++)**

**if (fabs(map[j][i])>fabs(map[Big][i]))**

**Big=j;**

**if (Big!=i) for (int j=0;j<=N;j++)**

**swap(map[Big][j],map[i][j]);**

**for (int j=N;j>=i;j--)**

**for (int k=i+1;k<N;k++)**

**map[k][j]-=map[k][i]/map[i][i]\*map[i][j];**

**}**

**for (int i=N-1;i>=0;i--) {**

**for (int j=i+1;j<N;j++)**

**map[i][N]-=map[j][N]\*map[i][j];**

**map[i][N]/=map[i][i];**

**}}**

**int main()**

**{**

**Init();**

**Gauss();**

**Print();**

**return 0;**

**}**