EX3: Tsai's Method

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Problem description

In this task, your objective is to calibrate a pinhole camera using a unit cube. You are given projections of vertices of a unit cube in the following order:

```
0 0 0
0 0 1
0 1 0
0 1 1
1 0 0
1 0 1
1 1 0
1 1 1
```

Your goal is to find the projection matrix and the rigid body transformation between the camera frame, and the cube's frame (from the cube's frame to camera frame).

You can use Tsai's method from the lecture slides or any other method of your choice.

Sample input/output

Sample input and output for this problem:

Input

```
634.926  379.78
604.775 408.441
597.474 355.542
567.102 386.328
639.252 405.609
606.225 436.003
598.333 380.358
565.039 413.205
```

Output

```
463   0 667
  0 433 378
  0   0   1

  0.14137 −0.721944 −0.677356 −0.676496
 0.529171 −0.523162  0.668042 0.0401524
−0.836656 −0.452878  0.308072    9.7656
```