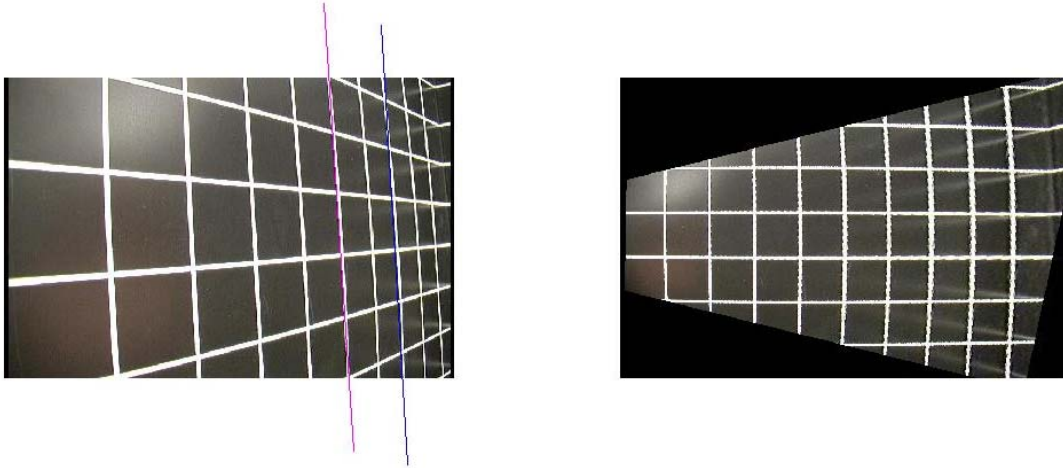


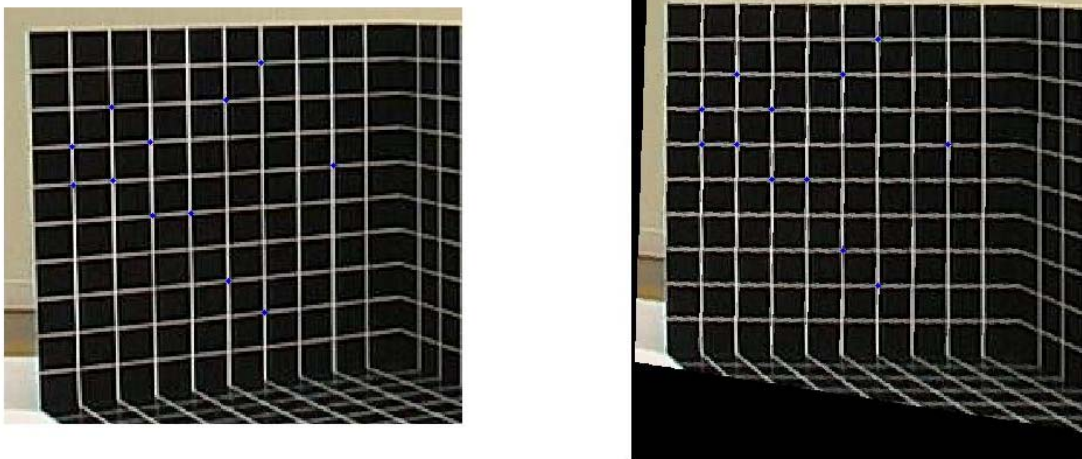
Homework 3: Removing perspective distortions.

It is possible to render the frontal view of a 2-dimensional surface from a single image of that surface observed from an arbitrary position. The following two images show an example – the image on the left is the original image of a 2D surface, the image on the right shows the synthesized frontal view.



This can be done, for example, using least squares. Since the size of the squares of the above plane are known (5 by 5 cm or any other size of your choosing), we can write a constraint that imposes the size of all squares to be identical in the frontal view.

Provide the necessary derivations and implement it in Matlab. Use the two images available from the course webpage. The first image and the corresponding synthesized frontal image were shown above. The second image (and its synthesized view) are shown below.



Write a short report. Submit your report and code by email or post it in Carmen. You can also submit your report in class.