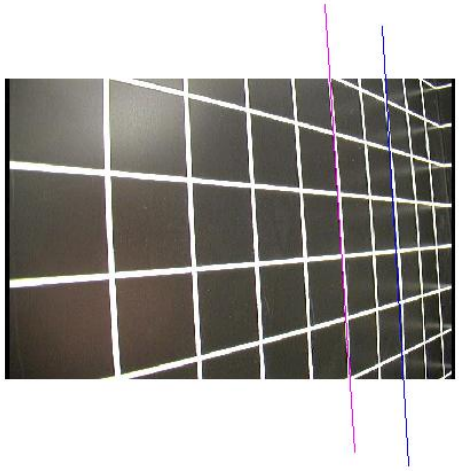
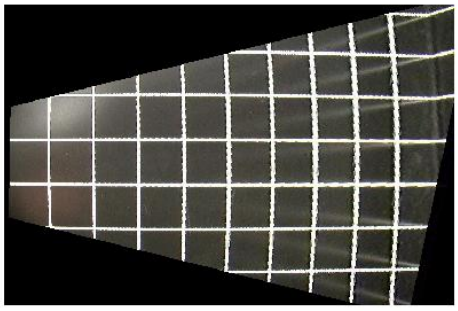
**<u>Homework 3:</u> Removing perspective distortions.**

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 images on the left is the original image of a 2D surface (note that the lines will meet at the horizon), 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), we can write a constraint that imposes these to be identical (i.e., equal to 5 cm) on the frontal view.

Implement the least-squares solution 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.