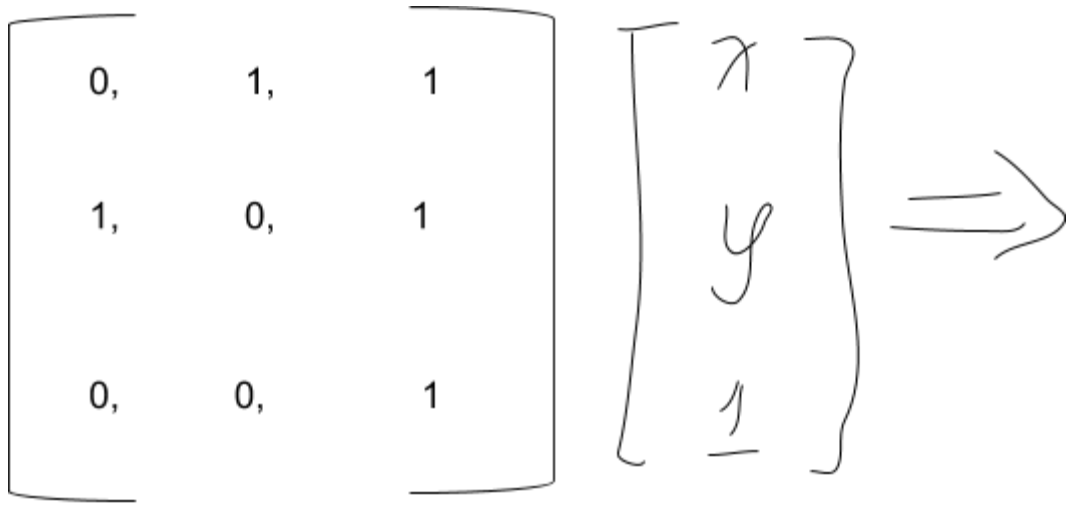
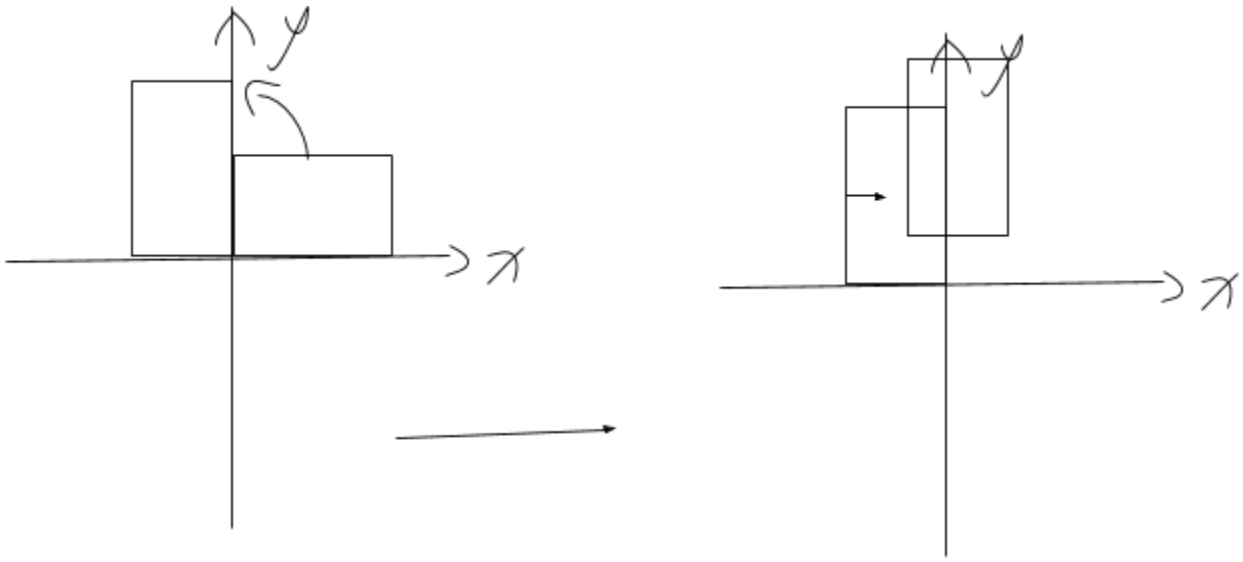
Homework #1 Report

1. the matrix will result in



$$\begin{pmatrix} -y+1 \\ x+1 \\ 1 \end{pmatrix}$$

so the answer is the point will be rotated counterclockwise by 90 degree, and translated by (1,1)



first it will rotate by 90 degree counterclockwise, so theta is 90

then it will translate by (1,1)

2. screenshot of problem 2, 3, 4.

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Question 2
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 0.707107  0.707107         0
-0.707107  0.707107         0
        0         0         1
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Question 3
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1 0 0 3
0 1 0 4
0 0 1 5
0 0 0 1
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Question 4
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step1: move (2,3) back to origin
 1  0 -2
 0  1 -3
 0  0  1
step2: scale, since the origin's size is same as new's, scale sx and sy are both 1
1 0 0
0 1 0
0 0 1
step3: move to (3,2)
1 0 3
0 1 2
0 0 1
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