QUIZ 6   Time: 10min

1. Write a 3×3 matrix, using homogeneous coordinates, which rotates the xy-palne by 45° (clockwise) through the origin, and then eflects through the $x - axis$. (Hint: write a matrix for the rotation, and then one for the reflection and multiply).

Bonus (5 points) Do we get the same transforamtion if we first reflect, then rotate? Justify your answer.

2. Let A be a square matrix. Write 5 equivalent statements which are equivalent to "A is an invertible matrix". (Bonus points for each additional statement).

Each problem is worth 5 points.