Although the homework is not to be returned and graded, it still should be done. Try to work the problems without looking at the answers!

1. Problem II.1, page 19.
2. Problem II.2, page 22.
3. Let \( f(x) \) denote the transformation of the previous problem (#II.2). Express \( f^{-1} \), the inverse of \( f \), as an affine map in the form \( f^{-1}(x) = Nx + w \).
5. Problem II.8, page 27.