

Name:

1. Suppose A is an invertible $n \times n$ matrix and that some generous person has provided a QR factorization, so Q is an orthogonal matrix, R is upper triangular matrix with no zeros on the diagonal, and $A = QR$. Given an n -vector b , state the **two** steps needed to solve $Ax = b$ for x using the QR factorization.

2. Find a right-inverse for the matrix

$$A = \begin{bmatrix} 1 & 3 & 5 \\ 2 & 4 & 6 \end{bmatrix}.$$

3. **[Extra Credit]** Use your right inverse from the previous problem to solve $Ax = b$ with $b = (2, 4)$