ASSIGNMENT 3

DUE: Friday, March 22nd, 2024

(Fundamentals of Matrix Computations, Third Edition).

Question 1: Exercise 3.1.5 and Exercise 3.1.6 pages 186-187 Consider the following data. Repeat Exercise 3.1.5, but this time ...

Question 2: Exercise 3.2.8 page 190 Show that if Q is orthogonal ...

Question 3: Exercise 3.2.14 page 193 Use a QR decomposition to solve ... and Exercise 3.2.47 page 207 (a) Let A = ... Find a reflector ...

Question 4: Exercise 3.2.37 page 202 (Fundamentals of If the assembled matrix wanted, ...

Question 5: Exercise 3.2.44 page 205 (Fundamentals of If the assembled matrix wanted, ...

Question 6: Show that the total flop count of QR decomposition by reflectors is about 4n^3/3 (twice that of an LU decomposition). Please read pages 203-205.

Question 7: Exercise 3.2.39 page 203 and Exercise 3.3.7 page 217 (Fundamentals of If the assembled matrix wanted, ...

Question 8: Exercise 3.3.10, page 219 and Exercise 3.3.15, page 223 (Fundamentals of Matrix Computations, Third Edition). MATLAB's qr command ...