Part 1 Written Component

***Why is it justifie­­d to use the LU or QR-factorizations as opposed of calculating an inverse matrix?***

It takes fewer operations to solve through LU and QR versus an inverse matrix. Also, QR/LU is stable with error.

***What is the benefit of using LU or QR-factorizations in this way? (Your answer should consider the benefit in terms of conditioning error.)***

