

## COMP1046 coursework 2: 2023/24 Marking Notes

Marks are out of 10. Where you do not receive full marks, feedback is provided so that you can see where the error is.

This guide provides some further feedback for common errors.

### Q1.

Loss of 0.5 marks if wrong values are transcribed (lack of attention to detail).

Loss of 0.5 marks for wrong formatting; in particular, the complete matrix should be in the format  $(A|b)$  [slide 6 of lecture 5].

### Q2.

-0.5 marks for not showing full working: calculation of rank or determinant (if using this approach to compute rank).

-0.5 marks for not properly explaining why the system is compatible, based on Rouché-Capelli theorem.

### Q3.

-2 marks if you do not use Cramer's Method (as required in the statement of the question).  
(*reason: this question is intended to check your knowledge of Cramer's Method*).

### Q4.

-0.5 marks for arithmetic error.

-1 mark if either unable to demonstrate how to do matrix product, or do not use the identity matrix correctly.

### Q5.

Note that if you make an error calculating  $A$  in Q4, then your version of  $A$  is used to mark Q5.

-2 marks if you do not show all steps applying elementary row operations.

-2 marks if you do not show complete matrix or all rows at each step.

-1 mark for not using the GE procedure provided in the lecture notes [slides 32-52, lecture 5], as specified in the question.

-2 marks for not applying GE to the complete matrix  $(A|b)$ . *Some students only applied to  $A$ .*

-1 mark for applying elementary row operation on the last column of known terms  $b$  in the complete matrix at *only some* steps of GE.