Name: _____

Student ID: _____

Quiz 4

This quiz is graded out of 10 marks. No books, calculators, notes or cell phones are allowed. You must show all your work, the correct answer is worth 1 mark the remaining marks are given for the work. If you need more space for your answer use the back of the page.

Question 1. Consider the matrix:

$$A = \begin{bmatrix} a & b & c \\ d & e & f \\ g & h & i \end{bmatrix}, B = \begin{bmatrix} j & k & l \\ m & n & o \\ p & q & r \end{bmatrix}, C = \begin{bmatrix} 2 & 3 & -3 \\ 3 & -1 & 2 \\ 5 & 1 & 6 \end{bmatrix} D = \begin{bmatrix} -3 & -2 & 5 \\ 2 & 3 & -4 \\ 6 & 4 & -10 \end{bmatrix}$$

a. *(3 marks)* If $\det(A) = -7$ and $\det(B) = \frac{1}{3}$ then compute $\det((3AB)^t B^3 (5BA)^{-1})$.

b. *(2 marks)* Compute $\det(D)$.

c. *(5 marks)* Compute $\det(C)$ using elementary operations.