Name: **Tutorial day and time:**

Select one *completed* problem for feedback:

1. Compute the inverse of the given matrix, if possible:

(a) $A = \begin{bmatrix} 1 & -5 & 0 \\ -2 & 15 & 4 \\ 4 & -19 & 1 \end{bmatrix}$

(b) $B = \begin{bmatrix} 2 & 3 & 4 \\ -3 & 6 & 9 \\ -1 & 9 & 13 \end{bmatrix}$

2. Simplify the expression $A^2(B^{-1}A)^{-1}(AB)^{-1}B$.

3. Find an expression for A^{-1}, given that:

   (a) $5A^3 = I$

   (b) $A^2 - 2A + I = 0$

   (c) A^2B is invertible, for some matrix B. (Give your answer in terms of $(A^2B)^{-1}$.)

4. Write the matrix $A = \begin{bmatrix} 2 & -4 \\ -4 & 9 \end{bmatrix}$ as a product of elementary matrices.