You have 7 minutes to answer the following questions. Solutions will be available on the course website for you to check your work.

1 Describe in words how you can recognize from a row echelon form of the augmented matrix of a system of equations whether that system is inconsistent.

2 Describe in words how to recognize from an augmented matrix in row echelon form whether the corresponding system (assuming it is consistent) has exactly one solution.

3 Find the reduced row echelon form of

$$\begin{bmatrix} 1 & 2 & -4 & 5 \\ 5 & -1 & 0 & 3 \\ -9 & 4 & -4 & -1 \end{bmatrix}$$

and write down the solution of the system of equations for which this is the augmented matrix.