

Name:

1. Find all solutions to the matrix equation $A\mathbf{x} = \mathbf{0}$, where

$$A = \begin{pmatrix} 1 & 2 & 3 \\ 4 & 5 & 6 \\ 7 & 8 & 9 \end{pmatrix}.$$

2. Write down a 4×3 matrix whose columns are linearly independent.