

QUESTION

State a condition on the matrix  $\mathbf{A}$  for the general system of  $n$  equations in  $n$  unknowns given by  $\mathbf{AX}=\mathbf{b}$  to have a unique solution.

ANSWER

$\mathbf{AX}=\mathbf{b}$  has a unique solution if  $\det \mathbf{A} \neq 0$ .