Name:	Section:		
Matrices	System of Equations	Number of Solutions	
$\left[\begin{array}{rrrr r}1 & 2 & 3\\0 & 0 & 4\end{array}\right]$			
$\left[\begin{array}{rrrr r}1&0&3\\0&1&2\end{array}\right]$			
$\left[\begin{array}{rrr rrr}1&0&3\\0&0&0\end{array}\right]$			
$\left[\begin{array}{rrrrr} 1 & 0 &   & 3 \\ 0 & 1 & 5 \\ 0 & 0 &   & 0 \end{array}\right]$			
$\left[\begin{array}{rrrrr} 1 & 0 & 3 \\ 0 & 1 & 5 \\ 0 & 0 & 2 \end{array}\right]$			
$\left[\begin{array}{rrrr rrr} 1 & 0 & 3 &   & 4 \\ 0 & 1 & 2 &   & 5 \end{array}\right]$			
$\left[\begin{array}{rrrr rrr} 1 & 0 & 3 &   & 4 \\ 0 & 0 & 0 &   & 5 \end{array}\right]$			
$\left[\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$			
$\left[\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$			

• Recall that a *pivot* is a leftmost nonzero entry of an echelon form matrix. What does a pivot correspond to in a *system of equations*?

• Theorem 2 The reduced echelon form of a linear system has three possible cases

1.	The system has	solutions if
2	The system has	solutions if
2.		
3.	The system has	solutions if