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- ❸ A basic variable is a variable that corresponds to a pivot column in the coefficient matrix.  
True (by definition). Free variables are those that do not correspond to a pivot column.

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False. The row corresponds to the variable  $x_4$  being equal to zero. The system still may or may not be consistent, depending on what the other rows look like.

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If the system is also consistent, then it has an infinite number of solutions.