

Quiz 2

Student ID Number:

Name _____

Math 3A, 8 AM

Please justify all your answers

October 11, 2018

Please also write your full name on the back

1. Is the vector $v = \begin{bmatrix} 5 \\ 17 \\ 15 \end{bmatrix}$ in the space spanned by the columns of $A = \begin{bmatrix} 1 & 2 \\ 4 & 5 \\ 3 & 6 \end{bmatrix}$? If so, write v as a linear combination of A 's columns.

2. True or False? Explain your reasoning.

(a) The homogeneous equation $Ax = 0$ always has at least one solution.

(b) If a system of equations has one or more free variables then it has a unique solution.