

King Fahd University of Petroleum and Minerals  
Department of Mathematics and Statistics  
Math 280 (161) Sec 01 - Quiz 1

Name:

ID:

Serial No.:

1. Use the Gauss-Jordan reduction method to find the value(s) of  $a$  and  $b$  so the following system has infinitely many solution.

$$x + y + 3z = 2$$

$$x + 2y + 4z = 3$$

$$x + 3y + az = b$$

2. Prove that if  $A$  is a nonsingular, then  $A^T$  is nonsingular and  $(A^T)^{-1} = (A^{-1})^T$ .