contact email: donsen2 at hotmail.com

MATH221 02 problems Name, ID

1. It is impossible for a system of linear equations to have exactly two solutions. Explain Why.

2. True or false? Give a specific counterexample when false.
(a) If columns 1 and 3 of B are the same, so are columns 1 and 3 AB.
(b) If rows 1 and 3 of B are the same, so are rows 1 and 3 of AB.
(c) If rows 1 and 3 of A are the same, so are rows 1 and 3 of AB.
(d) $(AB)^2 = A^2B2$.

3. Explain these facts. If the third column of B is all zero, the third column of EB is all zero for any E. If the third row of B is all zero, the third row of EB might not be zero.

4. True or False and explain your answers.
(a) If A^2 is defined then A is square.

(b) If AB and BA are defined then A and B are square.

(c) If AB and BA are defined then AB and BA are square.

(d) If $AB = B$ then $A = I$.