1. Let A = 

a) Use the formula for finding the inverse of a 2x2 matrix given below to find A-1

Let A be the 2× 2 matrix

A = 

Show that if ad-bc ≠0, then

A-1 = 

b) Use the definition of the inverse of a matrix given below, to verify your answer in part a).

If A and B are n× n matrices with AB = BA = In , then B is called the inverse of A (this terminology is appropriate because such a matrix B is unique) and A is said to be invertible.

The notation B = A−1 denotes that B is the inverse of A.

1. Use the definition of the inverse of a matrix to do the exercise below.

Show that



Is the inverse of



1. Let A and B be arbitrary n x n matrices whose entries are real numbers.

Use basic matrix laws only to expand to determine whether

(A - B)(A + B) = A2 – B2. Explain all steps. Use the distributive laws.

1. Determine whether each of these functions from Z to Z is one-to-one. Explain.
2. f(n) = n3
3. f(n) = /