## Problem 1

a)

$$x_4 = 1 - x_1 - x_2 - x_3$$

b)

Initial 
$$x_4 = 1 - x_1 - x_2 - x_3$$

$$z = x_1 + x_2 + 1/4x_3$$

Pivoting 
$$x_1$$
  $x_1 = 1 - x_2 - x_3 - x_4$   
 $z = 1 - 3/4x_3 - x_4$