Find the determinant of the given matrices if defined.

1.  3) 
2.  4) 

Find the inverses of the above matrices if possible. If not possible **write not possible and why**

5) #1 7) #3

6) #2 8) #4

Using the given systems of equations, create a matrix equation

9) 3y –3 z = 4 10) 30x + 10y = 155

 x + 5z = 2 10x – 50y = 325

  4y + z = 11

Find the solution of the above matrix equations with or without technology

11) #9 12) #10

13) Suppose you want to fill 17 one-kilogram sacks with a holiday snack mix. You plan to buy apples for $1.29/kg, nuts for $2.58/kg, and Twinkies for $1.10/kg. You have $35.00 and want the mix to contain three times as much of the nuts and apples as of the Twinkies by weight. How much of each ingredient should you buy?



1. Explain how each equation in the system above relates to the problem. What do the variables represent?
2. Create a matrix equation to solve this problem.
3. Solve the matrix equation **and** explain your result

14) Using a determinant find the area of a triangle with the given vertices

 (– 5 , 4) (1 , 6) and (3 , 2 )

15) Write a system of equations for the following word problem. Using that system of equations, write a matrix equation.

 A baker is making bread. He wants to make 100 pans of bread. The kitchen has two sizes of ovens. One oven bakes 4 pans at a time and the other oven bakes 12 pans at a time. The kitchen can use 10 ovens at a time. How many times will each oven be used in order to bake the 100 pans of bread?