1. Write out the ingredients requirement for 16 oz FroYos if the ingredient requirements for 8 oz FroYos are as follows:

	Vanilla	Tart	Mango	Surprise
White stuff	7 oz	6 oz	5 oz	4 oz
Clear stuff	1 oz	1 oz	1 oz	1 oz
Yellow stuff	0 oz	1 oz	0 oz	2 oz
Orange stuff	0 oz	0 oz	2 oz	1 oz

2. Here are inventory and delivery tables for a sock store. Write down a sample "Sales" table, and then write down the Inventory table that takes into account the recent deliveries and sales.

Inventory	Argyle	Tie-Dye	Fish-net	Toe-socks
Lexington	20	20	5	20
Frankfort	10	20	10	20
Cincinnati	20	20	20	20

Delivery	Argyle	Tie-Dye	Fish-net	Toe-socks
Lexington	2	2	1	2
Frankfort	1	2	1	2
Cincinnati	2	2	2	2

3. How large is the following matrix: $\left[\begin{array}{ccc|c} X & Y & Z & RHS \\ \hline 1 & 2 & 3 & 4 \\ 5 & 6 & 7 & 8 \end{array}\right]$

How many equations does it represent?
In how many variables?

4. If you double a 4×4 ingredients matrix, how big is it?
If you add two 4×4 inventory matrices, how big is the result?

5. The FroYo place has three machines. How much white stuff does the front machine use?

Ingredients	Vanilla	Tart	Mango	Surprise
White stuff	7 oz	6 oz	5 oz	4 oz
Clear stuff	1 oz	1 oz	1 oz	1 oz
Yellow stuff	0 oz	1 oz	0 oz	2 oz
Orange stuff	0 oz	0 oz	2 oz	1 oz

Orders	Front	Middle	Back
Vanilla	4	6	3
Tart	2	1	1
Mango	2	1	3
Surprise	1	2	4

1'. Now repeat doubling the matrix of #1:

$$2 \cdot \begin{bmatrix} 7 & 6 & 5 & 4 \\ 1 & 1 & 1 & 1 \\ 0 & 1 & 0 & 2 \\ 0 & 0 & 2 & 1 \end{bmatrix} =$$

2'. Now repeat adding the matrices of #2:

$$\begin{bmatrix} 20 & 20 & 5 & 20 \\ 10 & 20 & 10 & 20 \\ 20 & 20 & 20 & 20 \end{bmatrix} + \begin{bmatrix} 2 & 2 & 1 & 2 \\ 1 & 2 & 1 & 2 \\ 2 & 2 & 2 & 2 \end{bmatrix} =$$

5' Now finish multiplying matrices from #5: (Label the rows and columns if it helps)

$$\begin{bmatrix} 7 & 6 & 5 & 4 \\ 1 & 1 & 1 & 1 \\ 0 & 1 & 0 & 2 \\ 0 & 0 & 2 & 1 \end{bmatrix} \cdot \begin{bmatrix} 4 & 6 & 3 \\ 2 & 1 & 1 \\ 2 & 1 & 3 \\ 1 & 2 & 4 \end{bmatrix} =$$