Matrix practice Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Let *G* be the matrix shown below.



* 1. What is *g*1,3
	2. Two matrices can be added only if they have the same dimensions. If matrix *H* can be added to matrix *G*, what must be the dimensions of *H*?
	3. All the entries of the zero matrix are 0. Write the zero matrix with the same dimensions as *G*.
	4. Create a matrix to add to matrix *G* to get the zero matrix. This is called the **additive inverse of a matrix**. What could you name your new matrix to show its relationship to *G*?

 Shola's Bakery uses sugar, eggs, and butter in all of its cakes, as well as in the frosting. Matrix *C* shows how many eggs, cups of sugar, and ounces of butter are used in each angel food cake and in each devil's food cake. Matrix *F* shows how many eggs, cups of sugar, and ounces of butter are used in the frosting for each cake.



* 1. Write the matrix *C* + *F*, being sure to label the rows and columns, and explain what it represents.
	2. Write the matrix 3*C*, with labels, and explain what it represents.
	3. Leora orders three angel food cakes and two devil's food cakes without frosting, as represented by the matrix *L* at right. Use matrix multiplication to write a matrix that shows how much sugar, eggs, and butter Shola will need to fill Leora's order.

