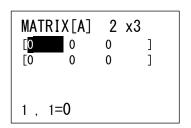
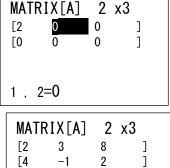
31. Using a TI-83 to solve a system of linear equations in a matrix form with rref(:

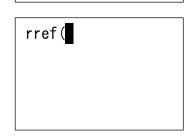
Matrices of linear equations expect the coefficients in front of variable to be put in the same order in each row, and the numerical solution (= to) as the last value. So for the  $2^{nd}$  set of equations in #27 (2x+3y=8 and 4x-y=2), the matrix to enter would look like

- 1. Press 2nd [MATRIX]. Press ► to display the MATRIX EDIT menu. Press 1 to select 1:[A],
- 2. Press **2** ENTER **3** ENTER to define a 2 x 3 matrix. The rectangular cursor indicates the current element. Ellipses (...) indicate additional columns beyond the screen.
- 3. Press **2** ENTER to enter the first element. The rectangular cursor moves to the second column of the first row.
- 4. Press **3** ENTER **8** ENTER to complete the first row for 2x + 3y = 8
- 5. Press 4 ENTER -1 ENTER 2 ENTER to enter the second row for 4x y = 2
- 6. Press 2nd [QUIT] to return to the home screen. If necessary, press CLEAR to clear the home screen. Press 2nd [MATRIX] ► to display the MATRIX MATH menu. Press ▲ to wrap to the end of the menu. Select B:rref( to copy rref( to the home screen.
- 7. Press 2nd [MATRIX] 1 to select 1:[A] from the MATRIX NAMES menu. Press ] ENTER. The reduced row-echelon form of the matrix is displayed and stored in Ans.
  - 1x + 0y = 1 therefore x = 1

0x + 1y = 2 therefore y = 2







2, 3=2

rr	<pre>rref([A])</pre>			
] ] ]	1	0	1	
	0	1	2]]	