RREF means that the pivots are equal to one, each pivot is to the right of the previous one, and the rest of the pivot column is zero where pivots are the 1st non-zero entry on each row.

Let's look at the second augmented matrix on problem one of Problems for Gaussian Elimination as an example.

First we need to decide if it is in RREF so lets check the three conditions.

$$\left(\begin{array}{cccccc|c} \boxed{1} & 1 & 0 & 1 & 0 & 1 & 0 \\ 0 & 0 & \boxed{1} & 2 & 0 & 2 & 0 \\ 0 & 0 & 0 & 0 & \boxed{1} & 3 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 & 0 \end{array}\right)$$

1. the pivots are all equal to one ✓
2. each pivot is to the right of the previous one ✓
3. the rest of the pivot column is zero ✓

Since all the conditions are met, this matrix is in RREF.

Now lets compute the solution set:

Because some columns don't have pivots, we need to set some variables as arbitrary values, λ

Lets set $\boxed{x_2 = \lambda_1}$, $\boxed{x_4 = \lambda_2}$, and $\boxed{x_6 = \lambda_3}$

now lets solve for the rest of the variables in terms of $\lambda_1, \lambda_2, \lambda_3$

from the augmented matrix,

$x_1 + x_2 + x_4 + x_6 = 0$ plugging in $\lambda_1, \lambda_2, \lambda_3$ and solving for x_1

$\boxed{x_1 = -\lambda_1 - \lambda_2 - \lambda_3}$

$x_3 + 2x_4 + 2x_6 = 0$ plugging in λ_2, λ_3 and solving for x_3

$\boxed{x_3 = -2\lambda_2 - 2\lambda_3}$

$x_5 + 3x_6 = 0$ plugging in λ_3 and solving for x_5

$\boxed{x_5 = -3\lambda_3}$

Putting this all together you get

$$\left\{ \begin{pmatrix} x_1 \\ x_2 \\ x_3 \\ x_4 \\ x_5 \\ x_6 \end{pmatrix} = \begin{pmatrix} 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \end{pmatrix} + \lambda_1 \begin{pmatrix} -1 \\ 1 \\ 0 \\ 0 \\ 0 \\ 0 \end{pmatrix} + \lambda_2 \begin{pmatrix} -1 \\ 0 \\ -2 \\ 1 \\ 0 \\ 0 \end{pmatrix} + \lambda_3 \begin{pmatrix} -1 \\ 0 \\ -2 \\ 0 \\ -3 \\ 1 \end{pmatrix} \right\}$$