CRAMER'S RULE:

IF $Ax = b$ IS A SYSTEM OF N LINEAR EQUATIONS IN N UNKNOWNS SUCH THAT $\det(A) \neq 0$, THEN THE SYSTEM HAS A UNIQUE SOLUTION GIVEN BY

$$x_1 = \frac{\det(A_1)}{\det(A)} \qquad x_2 = \frac{\det(A_2)}{\det(A)} \qquad \cdots \qquad x_N = \frac{\det(A_N)}{\det(A)}$$

WHERE A_j IS THE MATRIX OBTAINED BY REPLACING THE j^{TH} COLUMN OF A BY $\begin{bmatrix} b_1 \\ b_2 \\ \vdots \\ b_N \end{bmatrix}$.