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WORKING THE TOUCH SYSTEM IN CRAMER METHODS

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Annotation:this article focuses on issues related to solving the system of equations in the kramer method, with a brief overview of the related aspects.

Keywords: equation, system of equations, kramer method, formula.

A mathematical equality that indicates the interconnection of two or more expressions is called an equation. Equalization is often compared to scales. Equations are used in all theoretical and applied fields of mathematics and in physics, biology and other social sciences. The equations are named according to the number of variables in them. For example, a one-variable equation, a two-variable equation, etc. In the equation, expressions are usually written on either side of the equality sign (=). The equation will have one or more unknown values and are called variables or unknowns. Unknowns are usually represented by letters or other beggars.

The first solutions to the equations were written in the Rhind papyrus, written about 2,000 years before the era. The issues given were arithmetic issues. For example, equations for Masas such as" the sum of mass and its 1/7 is equal to 19 " have been written. For such a problem, a simple equation such as x+1/7X is written, defining the unknown as X. After arithmetic problems, two unknown-valued equations have occurred. The Greeks knew double linear equations. The ambiguous equation given in systems such as Archimedes ' "cattle matter" was not seriously studied until Diophantus produced and demonstrated several such equations. In a geomotric approach to equations, the Greeks and Arabs made conclusions based on the properties of certain curves and figures. A solution was found for private cases using proportions, but there was no satisfactory answer for the general case. This problem was overcome by René Descartes in the 17th century. He developed a general theorem explaining graphical solutions to equations. In particular, Descartes showed cases where conical sections were used. Furthermore, Descartes showed that each equation has a geometric point location and that each geometric point location has an equation. To represent equations with two unknowns x and y, Descartes took two axes perpendicular to each other. measured x along the horizontal axis and y along the vertical axis. He then showed that the linear equation represents a straight line and that the quadratic equation represents a conical line.

It is known that if several equations are considered together, they are called a system of equations. When the unknowns in a system of equations are replaced by a set of certain numbers, when all the equations of the system become mirrors, such a set of numbers is called the solution (root) of the system of equations. When such a set of numbers is one, the system of equations has a single solution, this system is called defined (assignment, specific), and this system of equations is called together. When a shared system has more than one solution, such a system is called an indefinite system. Such systems are called equivalent if the system of shared equations has the same set of solutions. When a system of equations does not have a single solution, such a system is called a non-concomitant system. the given system of equations is equivalent to a system given by multiplying one equation of the system by a different number from 0 and adding a term to another equation.

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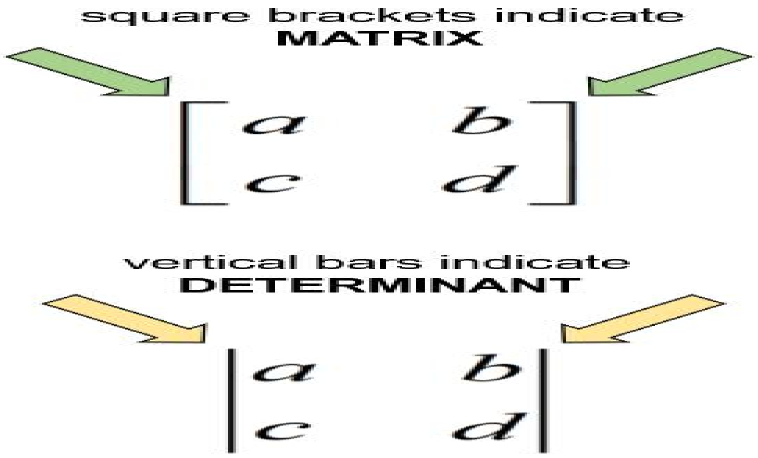

The standard formula to find the determinant of a **3×3** matrix is a break down of smaller **2×2** determinant problems which are very easy to handle. If you need a refresher, check out my other lesson on how to find the determinant of a 2×2. Suppose we are given a square matrix AA where,

$$A = \begin{bmatrix} a & b & c \\ d & e & f \\ g & h & i \end{bmatrix}$$

The determinant of matrix A is calculated as

$$\det\begin{bmatrix} a & b & c \\ d & e & f \\ g & h & i \end{bmatrix} = a \bullet \det\begin{bmatrix} e & f \\ h & i \end{bmatrix} - b \bullet \det\begin{bmatrix} d & f \\ g & i \end{bmatrix} + c \bullet \det\begin{bmatrix} d & e \\ g & h \end{bmatrix}$$

Its determinant can be calculated using the following formula

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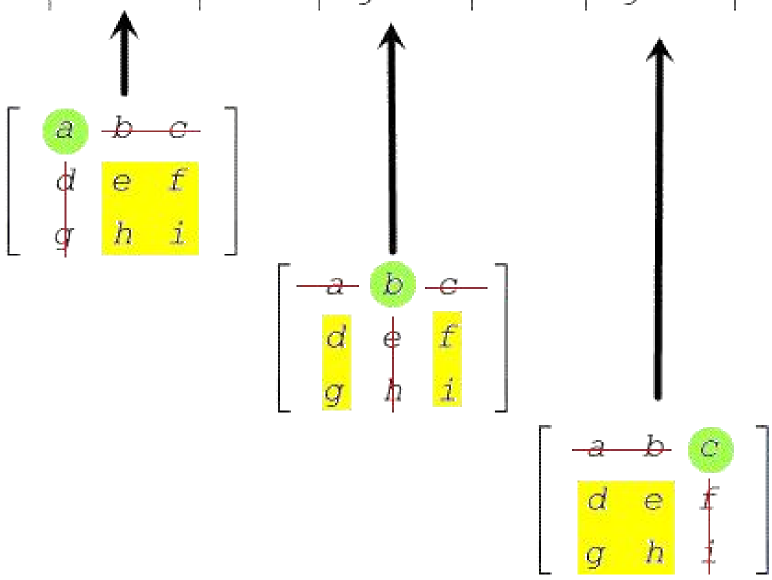
$$|A| = \begin{vmatrix} a & b & c \\ d & e & f \\ g & h & i \end{vmatrix} = a \cdot \begin{vmatrix} e & f \\ h & i \end{vmatrix} - b \cdot \begin{vmatrix} d & f \\ g & i \end{vmatrix} + c \cdot \begin{vmatrix} d & e \\ g & h \end{vmatrix}$$



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