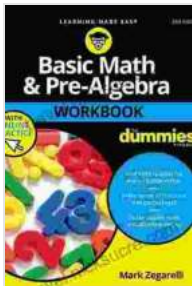


Algebra For Dummies: A Comprehensive Guide to Understanding Algebra

Algebra is a branch of mathematics that deals with symbols and their operations. It is used to solve problems that involve unknown quantities, such as finding the roots of an equation or the area of a triangle.



Algebra I For Dummies (For Dummies (Lifestyle))

by Mary Jane Sterling

★★★★☆ 4.4 out of 5

Language : English
File size : 5688 KB
Text-to-Speech : Enabled
Screen Reader : Supported
Enhanced typesetting : Enabled
Word Wise : Enabled
Print length : 355 pages
Lending : Enabled



Algebra For Dummies is a comprehensive to the fundamentals of algebra. This book will teach you everything you need to know to get started with algebra, including:

- Variables
- Equations
- Inequalities
- Polynomials

- Factoring
- Quadratic equations
- Systems of equations
- Logarithms
- Exponents

Variables

Variables are symbols that represent unknown quantities. They are used to write equations and inequalities that can be solved to find the values of the unknown quantities.

For example, the following equation represents the relationship between the length of a rectangle and its width:

$$l = 2w$$

In this equation, the variable l represents the length of the rectangle, and the variable w represents the width of the rectangle. We can use this equation to find the length of the rectangle if we know its width, or we can use it to find the width of the rectangle if we know its length.

Equations

Equations are statements that two expressions are equal to each other. They are used to solve for unknown quantities.

For example, the following equation represents the relationship between the sum of two numbers and their difference:

$$a + b = c$$

In this equation, the variables a and b represent the two numbers, and the variable c represents their sum. We can use this equation to find the value of one of the numbers if we know the values of the other two numbers.

Inequalities

Inequalities are statements that two expressions are not equal to each other. They are used to compare the values of two quantities.

For example, the following inequality represents the relationship between the length of two sides of a triangle:

$a < b$ In this inequality, the variables a and b represent the lengths of the two sides of the triangle. This inequality tells us that the length of side a is less than the length of side b .

Polynomials

Polynomials are expressions that are made up of variables and constants. They are used to represent a variety of mathematical objects, such as the area of a rectangle or the volume of a sphere.

For example, the following polynomial represents the area of a rectangle:

$$A = l * w$$

In this polynomial, the variables l and w represent the length and width of the rectangle, and the variable A represents the area of the rectangle.

Factoring

Factoring is the process of breaking down a polynomial into smaller polynomials. This can be done by using a variety of methods, such as the difference of squares, the sum of cubes, or the quadratic formula.

For example, the following polynomial can be factored as:

$$x^2 - 4 = (x + 2)(x - 2)$$

This factorization can be used to solve the equation $x^2 - 4 = 0$, which has two solutions: $x = 2$ and $x = -2$.

Quadratic equations

Quadratic equations are equations that are of the form $ax^2 + bx + c = 0$.

These equations can be solved using a variety of methods, such as the quadratic formula, the factoring method, or the completing the square method.

For example, the following quadratic equation can be solved using the quadratic formula:

$$x^2 - 5x + 6 = 0$$

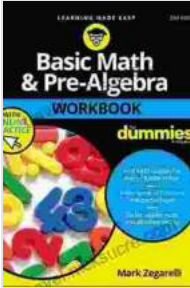
The solutions to this equation are $x = 2$ and $x = 3$.

Systems of equations

Systems of equations are sets of equations that are solved simultaneously. These systems can be used to solve for the values of multiple unknown quantities.

For example, the following system of equations can be used to solve for the values of x and y :

$$x + y$$

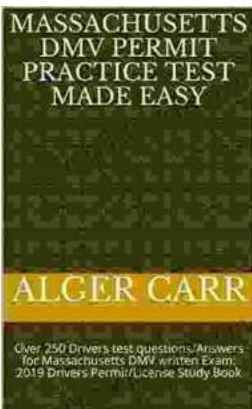


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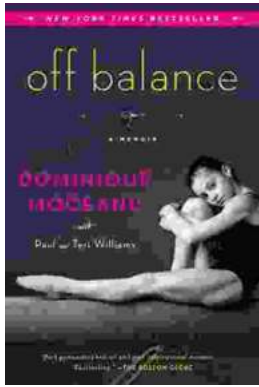
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