Concepts and Problems: Self-Teaching Guide (Wiley Self-Teaching Guides)

This self-teaching guide is designed to help you learn the basic concepts and solve problems in a variety of mathematical areas. It is written in a clear and concise manner, with plenty of examples and practice exercises.

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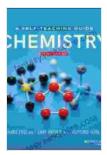
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Chapter 1: Number Systems

This chapter introduces the basic number systems, including the natural numbers, integers, rational numbers, and real numbers. It also discusses the operations of addition, subtraction, multiplication, and division.



Chemistry: Concepts and Problems, A Self-Teaching Guide (Wiley Self-Teaching Guides) by Richard Post

★★★★★ 4.5 out of 5
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Screen Reader : Supported
Enhanced typesetting: Enabled
Word Wise : Enabled
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1.1 Natural Numbers

The natural numbers are the numbers 1, 2, 3, ..., which are used for counting. They are also called the positive integers.

1.2 Integers

The integers are the numbers ..., -3, -2, -1, 0, 1, 2, 3, ..., which include the natural numbers and their negatives.

1.3 Rational Numbers

The rational numbers are the numbers that can be expressed as a fraction of two integers. They include the integers and the fractions.

1.4 Real Numbers

The real numbers are all of the numbers that can be represented on a number line. They include the rational numbers and the irrational numbers.

Chapter 2: Algebra

This chapter introduces the basic concepts of algebra, including variables, expressions, and equations. It also discusses the operations of addition, subtraction, multiplication, and division.

2.1 Variables

Variables are symbols that represent unknown numbers. They are used to write algebraic expressions and equations.

2.2 Expressions

Expressions are mathematical phrases that represent a single value. They can contain variables, numbers, and operators.

2.3 Equations

Equations are statements that two expressions are equal. They can be used to solve for the unknown variables.

Chapter 3: Geometry

This chapter introduces the basic concepts of geometry, including points, lines, planes, and angles. It also discusses the properties of geometric shapes.

3.1 Points

Points are the basic building blocks of geometry. They are represented by small circles.

3.2 Lines

Lines are straight paths that extend infinitely in both directions. They are represented by arrows.

3.3 Planes

Planes are flat surfaces that extend infinitely in all directions. They are represented by shaded regions.

3.4 Angles

Angles are formed by two rays that share a common endpoint. They are measured in degrees.

Chapter 4: Trigonometry

This chapter introduces the basic concepts of trigonometry, including the sine, cosine, and tangent functions. It also discusses the properties of trigonometric equations.

4.1 Sine Function

The sine function is a trigonometric function that measures the vertical component of a right triangle. It is defined as the ratio of the opposite side to the hypotenuse.

4.2 Cosine Function

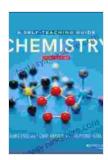
The cosine function is a trigonometric function that measures the horizontal component of a right triangle. It is defined as the ratio of the adjacent side to the hypotenuse.

4.3 Tangent Function

The tangent function is a trigonometric function that measures the ratio of the opposite side to the adjacent side of a right triangle.

Chapter 5: Calculus

This chapter introduces the basic concepts of calculus, including limits, derivatives, and integrals. It also discusses the applications of



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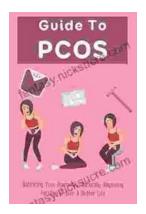
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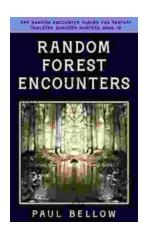


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