

Trigonometry Formula Sheet Formula Sheets

Trigonometry is a branch of mathematics that deals with the relationships between the sides and angles of triangles. It is used in a wide variety of applications, including surveying, navigation, architecture, and engineering.



Trigonometry Formula Sheet (Formula Sheets Book 2)

by Jonathan Tullis

★★★★★ 5 out of 5

Language : English

File size : 26670 KB

Screen Reader : Supported

Print length : 24 pages

Lending : Enabled



This formula sheet provides a comprehensive overview of the most important trigonometry formulas. It includes formulas for the sine, cosine, tangent, cotangent, secant, and cosecant functions. It also includes formulas for the Pythagorean theorem, the law of sines, and the law of cosines.

This formula sheet is a valuable resource for students, teachers, and professionals who need to use trigonometry in their work.

Sine Function

The sine function is defined as the ratio of the opposite side to the hypotenuse of a right triangle.

$$\sin(x) = \frac{\text{opposite}}{\text{hypotenuse}}$$

Cosine Function

The cosine function is defined as the ratio of the adjacent side to the hypotenuse of a right triangle.

$$\cos(x) = \frac{\text{adjacent}}{\text{hypotenuse}}$$

Tangent Function

The tangent function is defined as the ratio of the opposite side to the adjacent side of a right triangle.

$$\tan(x) = \frac{\text{opposite}}{\text{adjacent}}$$

Cotangent Function

The cotangent function is defined as the reciprocal of the tangent function.

$$\cot(x) = \frac{1}{\tan(x)}$$

Secant Function

The secant function is defined as the reciprocal of the cosine function.

$$\sec(x) = \frac{1}{\cos(x)}$$

Cosecant Function

The cosecant function is defined as the reciprocal of the sine function.

$$\csc(x) = \frac{1}{\sin(x)}$$

Pythagorean Theorem

The Pythagorean theorem states that the square of the hypotenuse of a right triangle is equal to the sum of the squares of the other two sides.

$$a^2 + b^2 = c^2$$

Law of Sines

The law of sines states that the ratio of the sine of an angle to the length of the opposite side is the same for all angles in a triangle.

$$\frac{\sin(A)}{a} = \frac{\sin(B)}{b} = \frac{\sin(C)}{c}$$

Law of Cosines

The law of cosines states that the square of the length of one side of a triangle is equal to the sum of the squares of the lengths of the other two sides minus twice the product of the lengths of the other two sides and the cosine of the angle between them.

$$c^2 = a^2 + b^2 - 2ab\cos(C)$$

Applications of Trigonometry

Trigonometry is used in a wide variety of applications, including:

- Surveying
- Navigation
- Architecture
- Engineering

- Physics
- Astronomy

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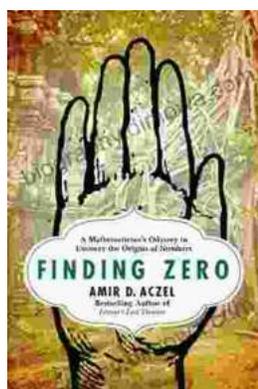
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