In order to master the techniques explained here it is vital that you undertake plenty of practice exercises so that they become second nature The sine, cosine and tangent of an angle are all defined in terms of trigonometry, but they can also be expressed as functions. Early Section completes the definition of trigonometric functions, using the Unit Circle, by introducing tangent, cosecant, secant, and cotangent functions. I. Basic Concepts. In this unit we examine these functions and their graphs. The strategy we adopt is to find one solution using knowledge of commonly occuring angles, and then use the symmetries in the graphs of the trigonometric functions to know how cos, sin and tan functions are defined for all real numbers; be able to sketch the graph of certain trigonometric functions; know how to differentiate the cos, sin and tan functions; understand the definition of the inverse function $f^{-1}(x) = \cos^{-1}(x)$ This text covers the content of a standard trigonometry course, beginning with a review of facts from geometry In fact, trigonometry is the study of relationships between the sides and angles of a triangle. The trigonometric functions are based on the unit circle, that is a circle with radius r=Since the circumference of a circle with radius r is C=2Br, the unit circle has circumference 2B This text covers circular and right-triangle trigonometry, analytic trigonometry (identities and trigonometric equations), and applications, and spends just enough time on vectors, complex numbers, and polar coordinates to neatly round out the semester Trigonometric equations. The earliest known work on trigonometry was recorded in Egypt and Babylon. n. Early astronomers used it to find out the distances of the stars and planets from the Earth trigonometry is the study of relationships between the sides and angles of a triangle. Section explores connections Pythagorean Identities$\sin \theta + \cos \theta =+ \tan \theta =\sec \theta+ \cot\theta = \csc \theta$ • Learn tricky trig functions — take things to the next level with SOH-CAH-TOA and circular functions Identify identities — dig into reciprocal, ratio, opposite-angle, and Pythagorean identities Make trig work — get practical with trig, find out how to use your calculator for complex solutions, and solve trig equations The earliest known work on trigonometry was recorded in Egypt and Babylon. In this unit we consider the solution of trigonometric equations. Early astronomers used it to find out the distances of the stars and planets from the Earth In this unit we are going to look at trigonometric identities and how to use them to solve trigonometric equations. The earliest known work on trigonometry was recorded in Egypt and Babylon. We also see how to restrict the domain of each function in order to define an TRIGONOMETRY Right Triangle Definitions Circular Definitions Other Identities sin cos tan sec csc opp adj hyp hyp opp adj cot adj opp hyp hyp adj opp $\theta\theta$ $\theta\theta$ $\theta\theta$ $= = = =$ sin cos tan sec csc yx rr yx cot x y rr x y $\theta\theta$ $\theta\theta$ $\theta\theta$ $= = = = =$ sin cos tan cot cos sinsec csc cos An Introduction to Trigonometry. • Learn tricky trig functions — take things to the next level with SOH-CAH-TOA and circular functions Identify identities — dig into reciprocal, ratio, opposite-angle, and Pythagorean identities Make trig work — get practical with trig, find out how to use your calculator In fact, trigonometry is the study of relationships between the sides and angles of a triangle.