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Trig Lab 2 – Engr 101

Abstract:

By the following virtual trig lab, we can say that trigonometric functions are essential for calculating angles in a single vector robot and also for the double link one, other variables such as alpha, Betha and distinguish letters were used as well. The three main trigonometric identities were proved:

1. $\sin^2(\theta) + \cos^2(\theta) = 1$

2. $1 + \tan^2(\theta) = \sec^2(\theta)$

3. $\tan(\theta) = \sin(\theta) / \cos(\theta)$

By proving these formulas, we may say that the experiment was successful and the units used were the correct ones. Even though we got some undefined values, we got to use the rule of the imaginary numbers that state that the inverse tangent of a number which denominator equals to 0, the result of it will always be 90 degrees, depending on the sign the variables have.