Math 1613 - Trigonometry

Quiz #2 - 2009.09.01

Solutions

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1. Find one solution for the following equation, assume that θ is acute.

$$\sin(\theta - 20^\circ) = \cos(2\theta + 5^\circ)$$

We start with the equation

$$\theta - 20^\circ + 2\theta + 5^\circ = 90^\circ$$

Solving for θ gives $\theta = 35^\circ$.

2. Give the exact value of the following trigonometric expressions.

a) $\sin(30^\circ)$

$$\sin(30^\circ) = \frac{1}{2}$$

b) $\cos(60^\circ)$

$$\cos(60^\circ) = \frac{1}{2}$$

c) $\tan(45^\circ)$

$$\tan(45^\circ) = 1$$