

Math 1613 - Trigonometry

Quiz #20 - 2011.10.27

Solutions

1. Why do we need deal with the SSA case for solving triangles as a separate problem?

This is the ambiguous case, meaning that the triangle is not unique with the information provided.

2. Solve the following equation exactly for x :

$$\cot^{-1}(x) = \tan^{-1}\left(\frac{4}{3}\right)$$

Applying $\cot(x)$ to both sides gives

$$x = \cot\left(\tan^{-1}\left(\frac{4}{3}\right)\right)$$

and setting $\theta = \tan^{-1}\left(\frac{4}{3}\right)$ gives

$$x = \cot(\theta)$$

where $\tan(\theta) = \frac{4}{3}$. Thus

$$x = \frac{3}{4}.$$