

Math 1613 - Trigonometry

Quiz #11 - 2009.10.27

Solutions

Determine whether the positive or negative square root should be selected.

1.

$$\sin(215^\circ) = \pm \sqrt{\frac{1 - \cos(430^\circ)}{2}}$$

Since 215° lies in the third quadrant where $\sin(\theta) < 0$, we chose the negative sign.

2.

$$\cos(94^\circ) = \pm \sqrt{\frac{1 + \cos(188^\circ)}{2}}$$

Since 94° lies in the second quadrant where $\cos(\theta) < 0$, we chose the negative sign.

3.

$$\tan(200^\circ) = \pm \sqrt{\frac{1 - \cos(400^\circ)}{1 + \cos(400^\circ)}}$$

Since 200° lies in the third quadrant where $\tan(\theta) > 0$, we chose the positive sign.