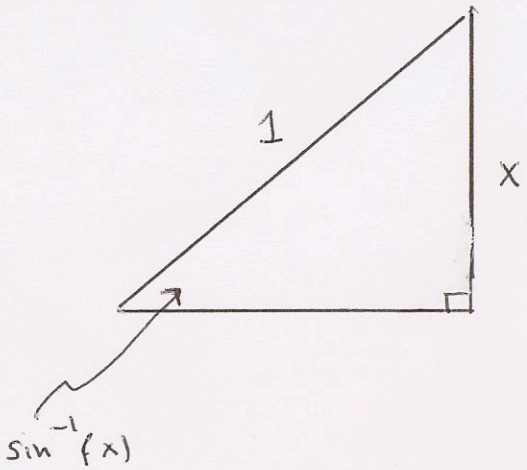
NAME:_____

HOMEWORK FOR WORKSHEET 7 MATH 1300 DUE February 29, 2008

1. Use the method developed in Worksheet 7 to find the derivative of $\cos^{-1}(x)$.

2. An alternate method for finding the derivative of $\cos^{-1}(x)$ is to find an identity relating this function and $\sin^{-1}(x)$ and then differentiating this identity (and using that we already know $\frac{d}{dx}\sin^{-1}(x)$. Assuming $0 < x < 1$ use the basic triangle from Worksheet 7 to show that

$$\sin^{-1}(x) + \cos^{-1}(x) = \frac{\pi}{2}.$$



3. Differentiate the relationship you found in (2) to find $\cos^{-1}(x)$.