Name: _____ Date: _____ Per: _____

PC 4-6: Inverse Trig Practice

Evaluate each INVERSE TRIG EXPRESSION. Be sure that your answer is in the correct interval:

1) $\sin^{-1}\left(\frac{\sqrt{2}}{2}\right)$ **2)** $\sin^{-1}(1)$ **3)** $\sin^{-1}\left(-\frac{\sqrt{2}}{2}\right)$

4) $\cos^{-1}\left(-\frac{1}{2}\right)$ **5)** $\cos^{-1}(-1)$ **6)** $\cos^{-1}\left(-\frac{\sqrt{3}}{2}\right)$

7) $\tan^{-1}(1)$ **8)** $\tan^{-1}\left(-\frac{1}{\sqrt{3}}\right)$ **9)** $\tan^{-1}(-\sqrt{3})$

Evaluate each composite trig expression.

10) $\sin^{-1}\left(\cos\frac{\pi}{3}\right)$ **11)** $\cos^{-1}\left(\sin\frac{-\pi}{6}\right)$ **12)** $\tan^{-1}(\cos\pi)$

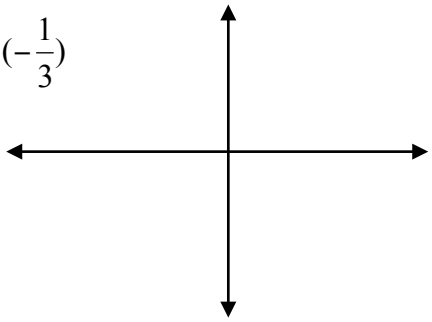
13) $\sin(\cos^{-1}1)$ **14)** $\sin(\tan^{-1}\frac{1}{\sqrt{3}})$ **15)** $\tan\left(\sin^{-1}\frac{-\sqrt{2}}{2}\right)$

16) $\tan\left(2\cos^{-1}\frac{-1}{2}\right)$ **17)** $\sec(3\sin^{-1}\frac{1}{2})$ **18)** $\csc(4\tan^{-1}\sqrt{3})$

19) $\sin^{-1}\left(\sin\frac{\pi}{3}\right)$ **20)** $\cos^{-1}\left(\cos\frac{2\pi}{3}\right)$ **21)** $\tan^{-1}\left(\tan\frac{5\pi}{6}\right)$

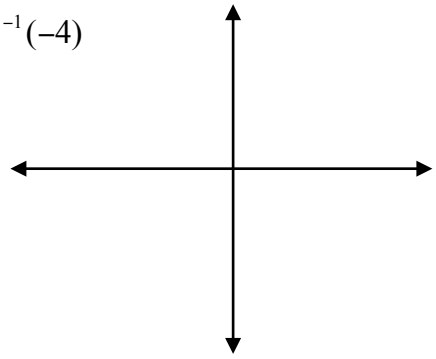
Find all 6 trig ratios for each example below. Note that the quadrant is determined by the inverse trig function.

19) Given: $\theta = \cos^{-1}(-\frac{1}{3})$



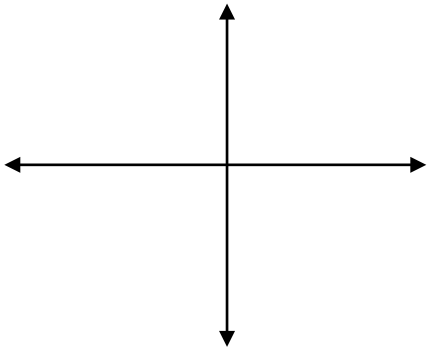
$\sin\theta =$	$\csc\theta =$
$\cos\theta =$	$\sec\theta =$
$\tan\theta =$	$\cot\theta =$

20) Given: $\theta = \tan^{-1}(-4)$



$\sin\theta =$	$\csc\theta =$
$\cos\theta =$	$\sec\theta =$
$\tan\theta =$	$\cot\theta =$

21) Given: $\theta = \csc^{-1}(6)$



$\sin\theta =$	$\csc\theta =$
$\cos\theta =$	$\sec\theta =$
$\tan\theta =$	$\cot\theta =$

22) Find $\tan(\cos^{-1}\frac{2}{3})$

23) Find $6\sec(\sin^{-1}-\frac{1}{3})$

24) Find $10\cot(\sin^{-1}-\frac{4}{5})+20\csc(\cos^{-1}-\frac{3}{5})$