**PreCalculus**
**WS: 4.7 Extra Practice**

**Name** Key 2016
**Date** 11/15-11/16 **Block** 1A, 2B

***Find the exact value without a calculator.***

1. $\arctan\sqrt{3} = \frac{\pi}{3}$

2. $\sin^{-1}\left(-\frac{1}{2}\right) = -\frac{\pi}{6}$

3. $\tan^{-1} 0 = 0$

4. $\arccos\left(\frac{1}{2}\right) = \frac{\pi}{3}$

5. $\tan^{-1}\left(-\sqrt{3}\right) = -\frac{\pi}{3}$

6. $\arcsin 1 = \frac{\pi}{2}$

7. $\sin^{-1}\left(\sin\frac{3\pi}{4}\right) = \frac{\pi}{4}$

8. $\cos^{-1}\left(\cos\frac{11\pi}{6}\right) = \frac{\pi}{6}$

9. $\arctan\left(\tan\frac{5\pi}{4}\right) = \frac{\pi}{4}$

10. $\cos^{-1}\left(\cos\left(\frac{7\pi}{4}\right)\right) = \frac{\pi}{4}$

11. $\sin\left(\tan^{-1}(-1)\right) = -\frac{\sqrt{2}}{2}$

12. $\arcsin\left(\cos\left(\frac{\pi}{3}\right)\right) = \frac{\pi}{6}$

13. $\arccos(\cos\pi) = \pi$

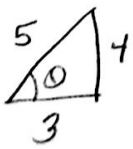
14. $\tan^{-1}(\cos\pi) = -\frac{\pi}{4}$

15. $\sin[\arcsin(0.3)] = 0.3$

16. $\tan(\arctan 25) = 25$

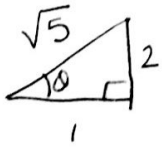
**Find the exact value of the expression. (Hint: Sketch a right triangle.)**

17. $\sec\left[\arcsin\left(\frac{4}{5}\right)\right] =$



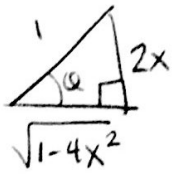

$5/3$

18. $\cos(\tan^{-1} 2) = \frac{\sqrt{5}}{5}$




**Write an algebraic expression that is equivalent to the expression. (Hint: Sketch a right triangle.)**

19. $\cos(\arcsin 2x) = \sqrt{1-4x^2}$




20. $\sec(\arctan 3x) = \sqrt{9x^2+1}$