

Notes Section 4.6 - Inverse trig functions

I, II

I, IV

\cos^{-1} [arccos]

\sin^{-1} [arcsin]

\sec^{-1}

\tan^{-1}

\cot^{-1}

\csc^{-1}

• find the exact value.

1. $\cos^{-1}(1/2) = \pi/3$

"the angle whose cosine is 1/2"

2. $\tan^{-1}(-1) = -\pi/4$

3. $\arccos(-\sqrt{2}/2) = 3\pi/4$

4. $\csc^{-1}(-2) = -\pi/4$

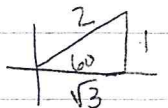
5. $\tan^{-1}(\sqrt{3}) = \pi/3$

6. $\cos^{-1}1 = 0$

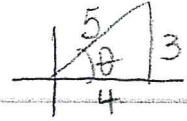
7. $\cos^{-1}(-2) = \text{does not exist}$

8. $\sin(\arcsin 1/2) = 1/2$

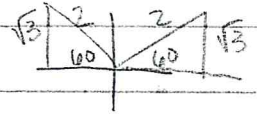
9. $\cos^{-1}(\cos 5\pi/2) = \pi/2$



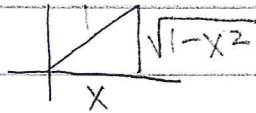
$$10. \sin(\cos^{-1} 4/5) = \boxed{3/5}$$



$$11. \arcsin(\sin 2\pi/3) = \boxed{\pi/3}$$



12. Write $\cot(\arccos x)$ as an algebraic expression of x that does not involve trig functions.

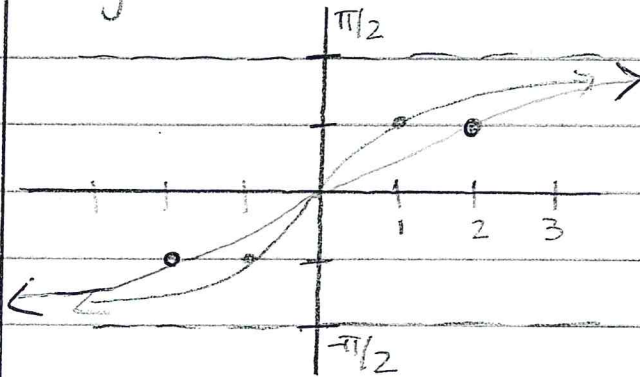


$$\boxed{\frac{x}{\sqrt{1-x^2}}}$$

• graph

$$1. y = \arctan x/2$$

HS 2



$$2. y = 1/2 \arcsin(x \pm 2)$$

VS '12, left 2