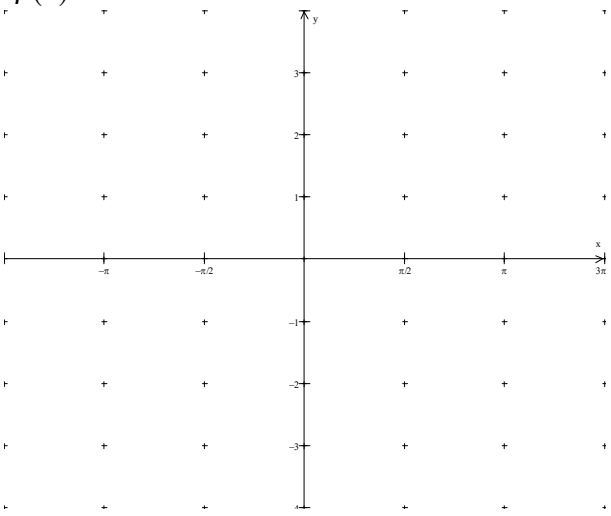
Magnet Analysis 1A Name_____
Rose 3/7/2009

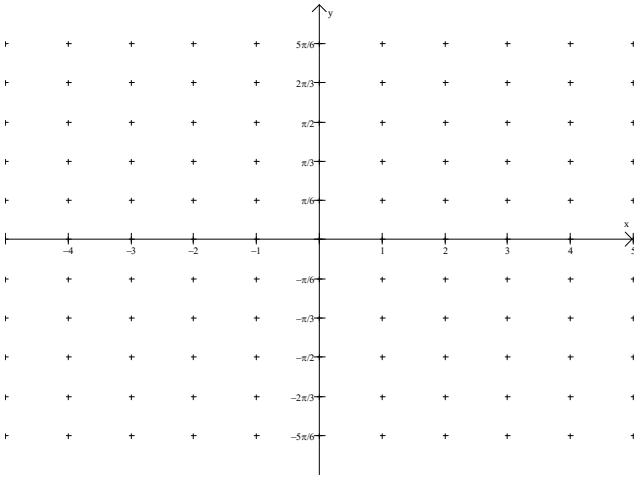
Derivatives of Inverse Trigonometric Functions

$\frac{d}{dx}[\arctan x] =$

$f(x) = \tan x$

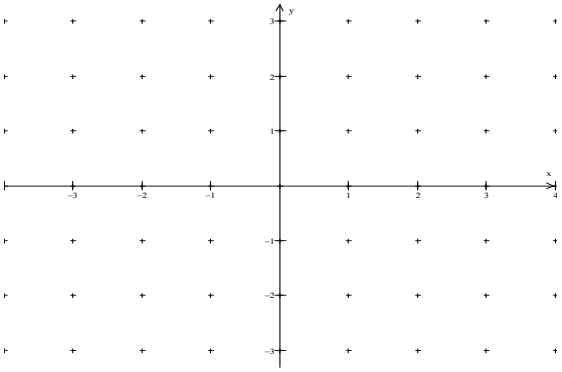


$f^{-1}(x) = \arctan x$

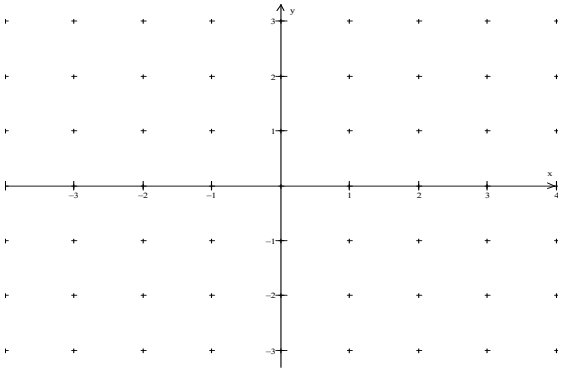


$y = \arctan x$

Sketch of guess for $\frac{d}{dx}[\arctan x]$

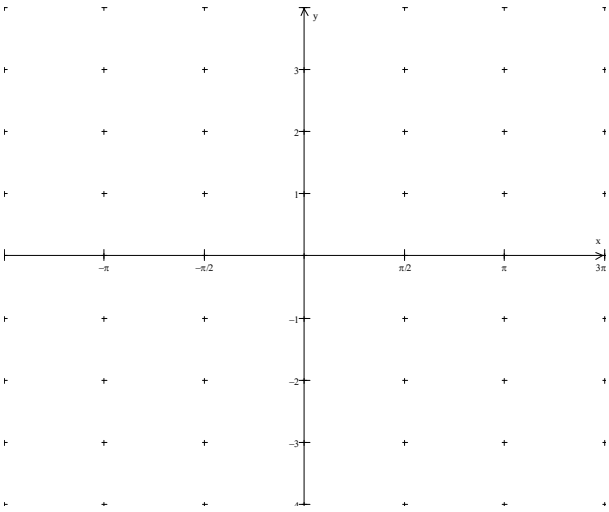


Sketch of $\frac{d}{dx}[\arctan x]$

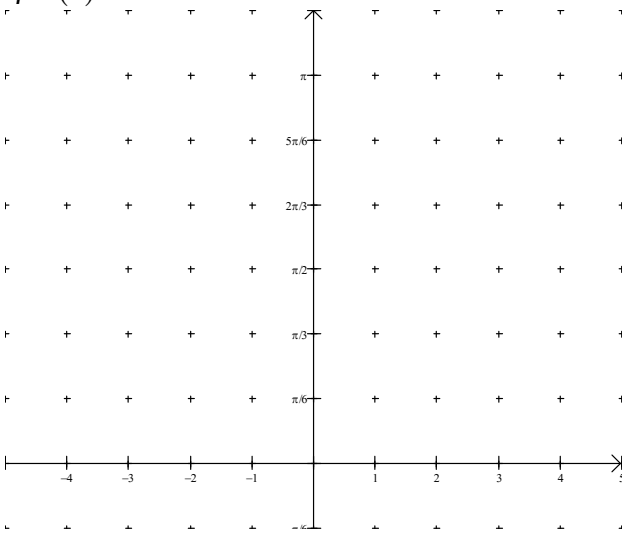


$$\frac{d}{dx}\left[arc\cot x\right]=$$

$f(x)=\cot x$

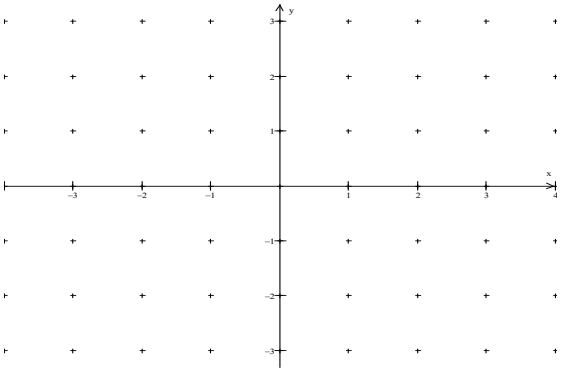


$f^{-1}(x)=\operatorname{arc}\cot x$

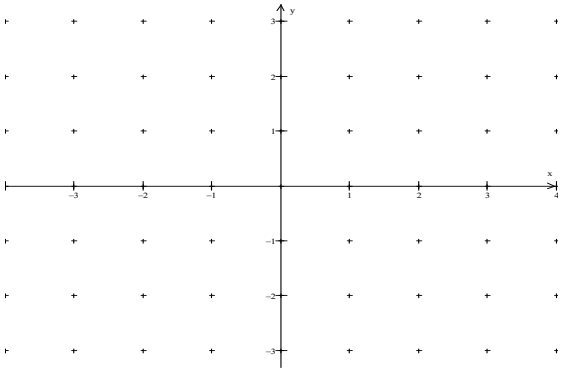


$y=\operatorname{arc}\cot x$

Sketch of guess for $\frac{d}{dx}\left[\operatorname{arc}\cot x\right]$

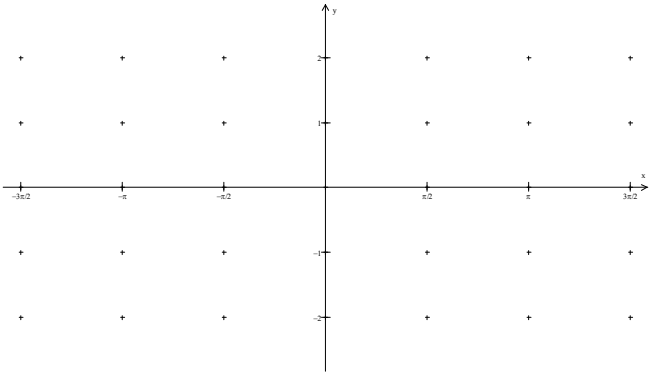


Sketch of $\frac{d}{dx}\left[arc\cot x\right]$

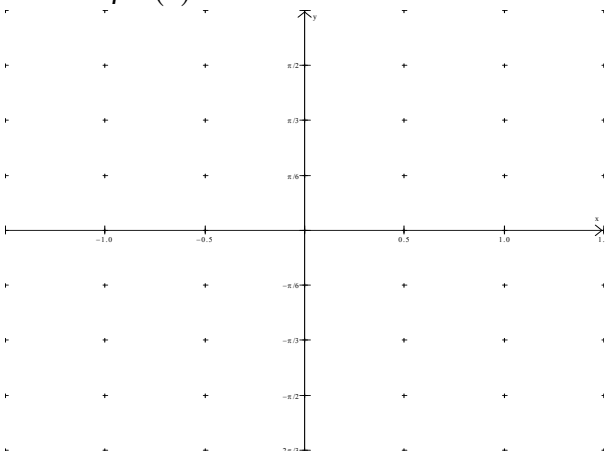


$$\frac{d}{dx}\left[\arcsin x\right] =$$

$f(x) = \sin x$

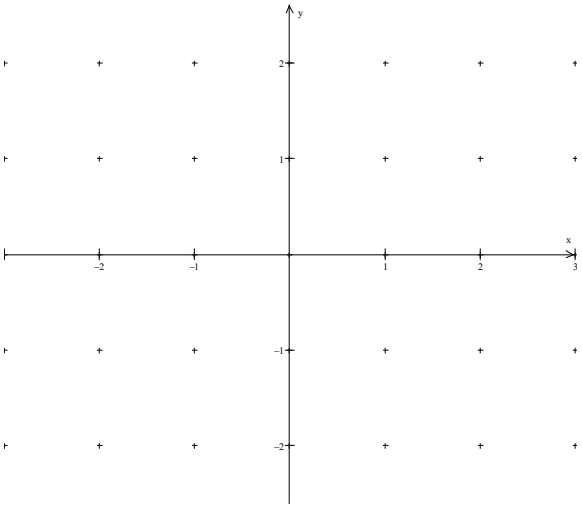


$f^{-1}(x) = \arcsin x$

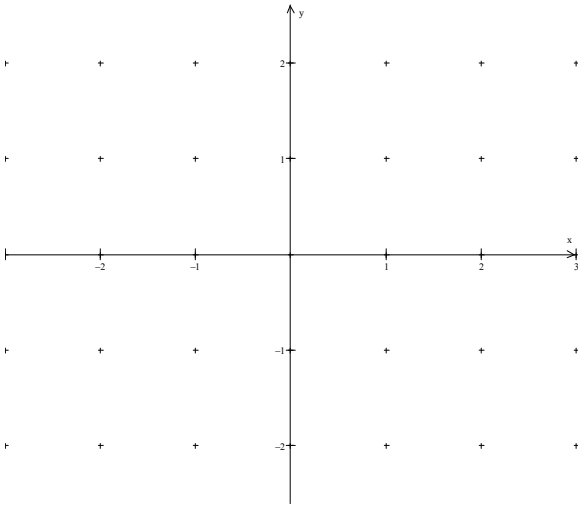


$y = \arcsin x$

Sketch of guess of $\frac{d}{dx}\left[\arcsin x\right]$

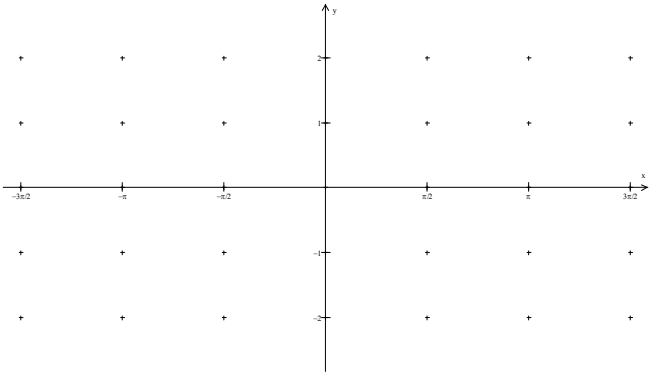


Sketch of $\frac{d}{dx}\left[\arcsin x\right]$

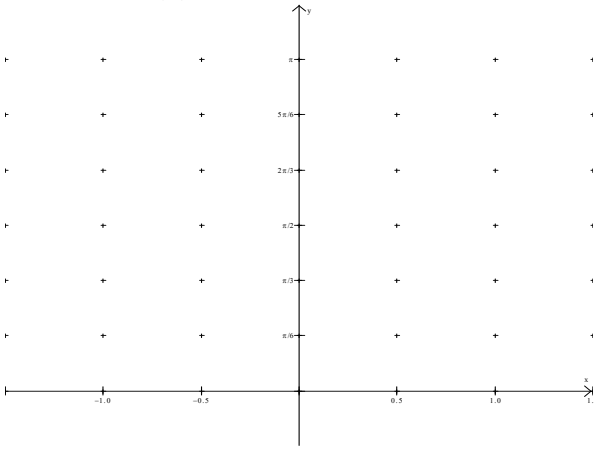


$$\frac{d}{dx}\left[\arccos x\right] =$$

$f(x) = \cos x$

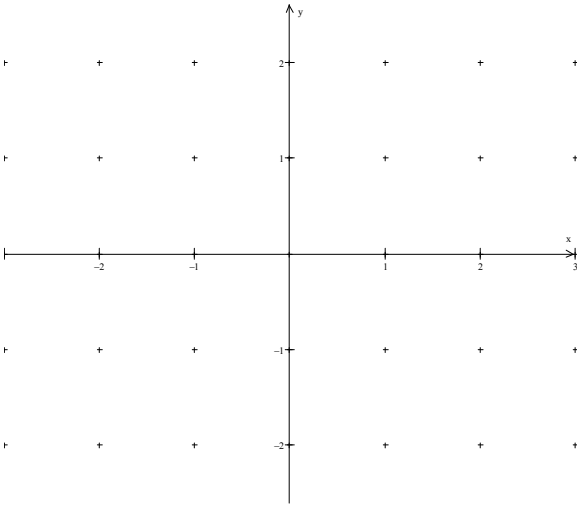


$f^{-1}(x) = \arccos x$

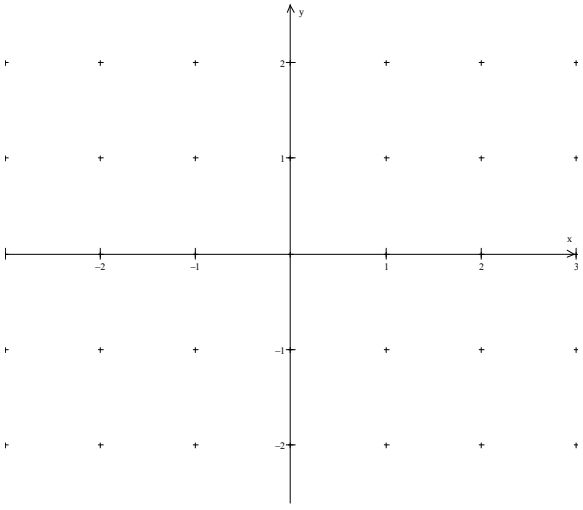


$y = \arccos x$

Sketch of guess of $\frac{d}{dx}\left[\arccos x\right]$

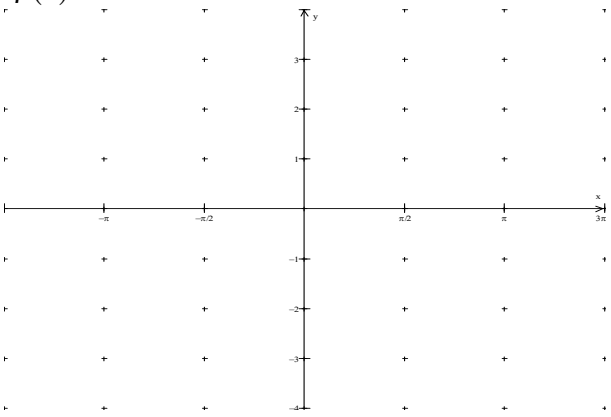


Sketch of $\frac{d}{dx}\left[\arccos x\right]$

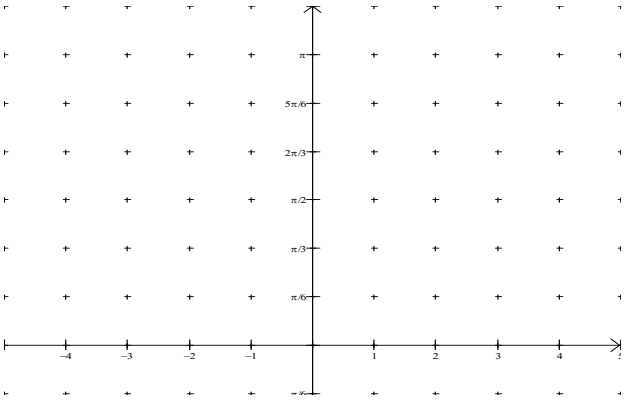


$\frac{d}{dx}\left[\operatorname{arcsec} x\right] =$

$f(x) = \sec x$

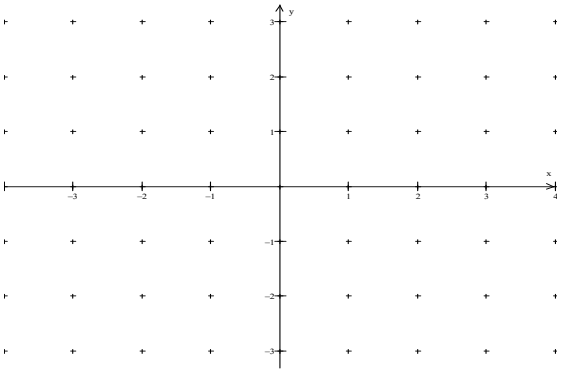


$f^{-1}(x) = \operatorname{arcsec} x$

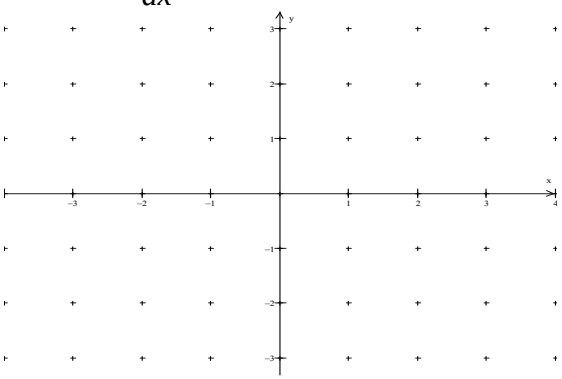


$y = \operatorname{arcsec} x$

Sketch of guess for $\frac{d}{dx}\left[\operatorname{arcsec} x\right]$

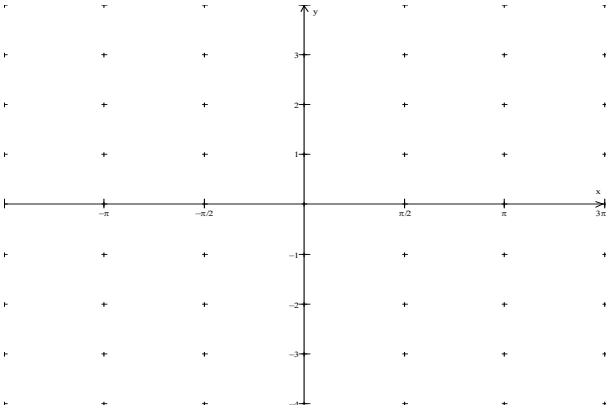


Sketch of $\frac{d}{dx}\left[\operatorname{arcsec} x\right]$

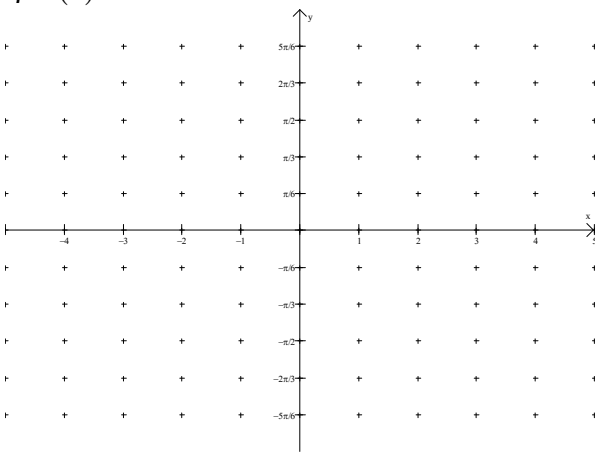


$\frac{d}{dx}\left[\operatorname{arc}\csc x\right] =$

$f(x) = \csc x$

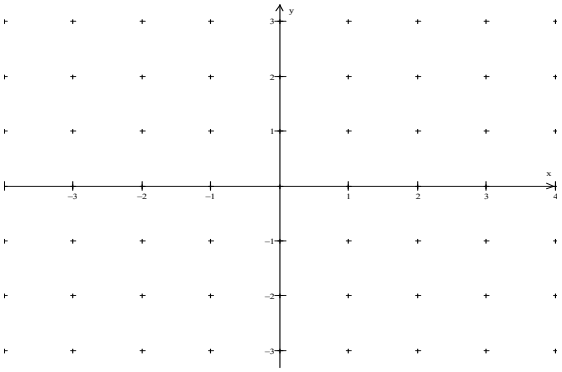


$f^{-1}(x) = \operatorname{arc}\csc x$



$y = \operatorname{arc}\csc x$

Sketch of guess for $\frac{d}{dx}\left[\operatorname{arc}\csc x\right]$



Sketch of $\frac{d}{dx}\left[\operatorname{arc}\csc x\right]$