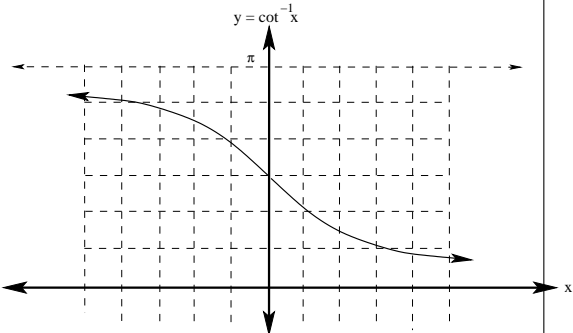
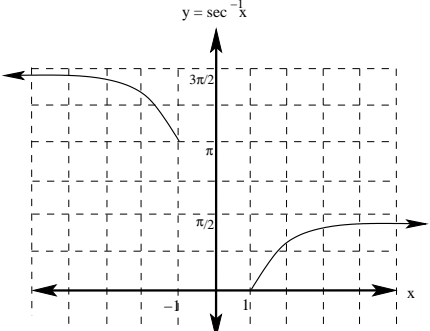


Inverse Trig Functions

Definition	Domain	Range	Graph
$y = \sin^{-1} x$ iff $x = \sin y$	$-1 \leq x \leq 1$	$-\frac{\pi}{2} \leq y \leq \frac{\pi}{2}$	<p>The graph shows the function $y = \sin^{-1} x$ on a coordinate plane. The x-axis is labeled from -1 to 1 with tick marks at -1, -1/2, 1/2, and 1. The y-axis is labeled from $-\pi/2$ to $\pi/2$ with tick marks at $-\pi/2$ and $\pi/2$. The curve is an increasing S-shape passing through the origin (0,0). It starts at the point $(-1, -\pi/2)$ and ends at $(1, \pi/2)$.</p>
$y = \cos^{-1} x$ iff $x = \cos y$	$-1 \leq x \leq 1$	$0 \leq y \leq \pi$	<p>The graph shows the function $y = \cos^{-1} x$ on a coordinate plane. The x-axis is labeled from -1 to 1 with tick marks at -1, -1/2, 1/2, and 1. The y-axis is labeled from 0 to π with tick marks at $\pi/2$ and π. The curve is a decreasing S-shape passing through the point $(0, \pi/2)$. It starts at the point $(-1, \pi)$ and ends at $(1, 0)$.</p>
$y = \tan^{-1} x$ iff $x = \tan y$	$-\infty < x < \infty$	$-\frac{\pi}{2} < y < \frac{\pi}{2}$	<p>The graph shows the function $y = \tan^{-1} x$ on a coordinate plane. The x-axis is labeled from -1 to 1 with tick marks at -1 and 1. The y-axis is labeled from $-\pi/2$ to $\pi/2$ with tick marks at $-\pi/2$ and $\pi/2$. Horizontal dashed lines are drawn at $y = \pi/2$ and $y = -\pi/2$, representing asymptotes. The curve is an increasing S-shape passing through the origin (0,0). It approaches the asymptotes as $x \rightarrow \pm\infty$.</p>

Definition	Domain	Range	Graph
$y = \cot^{-1} x$ iff $x = \cot y$ iff $\frac{1}{x} = \tan y$	$-\infty < x < \infty$	$0 < y < \pi$	
$y = \sec^{-1} x$ iff $x = \sec y$ iff $\frac{1}{x} = \cos y$	$x \geq 1$ or $x \leq -1$	$0 \leq y < \frac{\pi}{2}$ or $\pi \leq y < \frac{3\pi}{2}$	
$y = \csc^{-1} x$ iff $x = \csc y$ iff $\frac{1}{x} = \sin y$	$x \geq 1$ or $x \leq -1$	$\frac{\pi}{2} \leq y < \pi$ or $\pi < y \leq \frac{3\pi}{2}$	