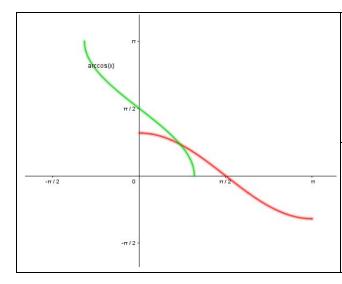
Class Discussion

Unit 4 Topic 7 Part 2 arccosine and arctangent

$\cos x$ and $\arccos x$



$$f(x) = \cos x$$

domain: $x \in [0, \pi]$

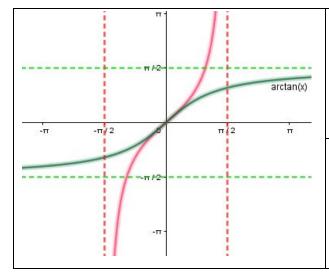
range: $y \in [-1,1]$

$$f(x) = \arccos x$$

domain: $x \in [-1,1]$

range: $y \in [0, \pi]$

$\tan x$ and $\arctan x$



$f(x) = \tan x$

domain: $x \in \left(-\frac{\pi}{2}, \frac{\pi}{2}\right)$

range: $y \in (-\infty, \infty)$

$$f(x) = \arctan x$$

domain: $x \in (-\infty, \infty)$

range:
$$y \in \left(-\frac{\pi}{2}, \frac{\pi}{2}\right)$$

Ex 1: Evaluate

(a)
$$\arctan(-\sqrt{3})$$

(b)
$$arccos\left(-\frac{\sqrt{2}}{2}\right)$$

Ex 2: Evaluate

$$\cos\left(\arctan 1 + \arccos\left(-\frac{\sqrt{2}}{2}\right)\right)$$

$$\arccos\left(\tan\left(\arcsin\left(\frac{\sqrt{2}}{2}\right)\right)\right)$$