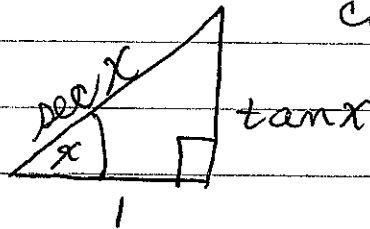
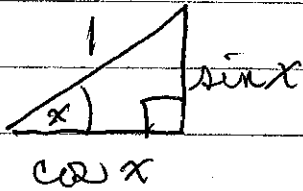


Trig. formulas and derivatives:

$$\tan x = \frac{\sin x}{\cos x}$$

$$\sec x = \frac{1}{\cos x}$$



$$\cos^2 x + \sin^2 x = 1$$

$$\tan^2 x + 1 = \sec^2 x$$

$$\frac{d}{dx}(\cos x) = -\sin x$$

$$\frac{d}{dx}(\sin x) = \cos x$$

$$\frac{d}{dx}(\tan x) = \sec^2 x$$

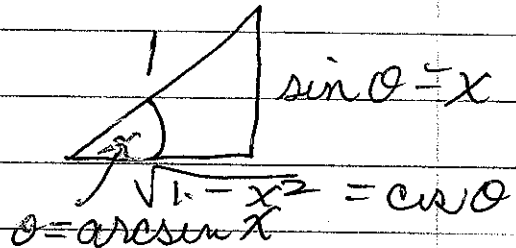
$$\frac{d}{dx}(\sec x) = \sec x \tan x$$

Inverses:

$$\sin(\arcsin x) = x = \tan(\arctan x) = x$$

$$\arcsin(\sin \theta) = \theta \quad \arctan(\tan \theta) = \theta$$

$$\frac{d}{dx}(\arcsin x) = \frac{1}{\sqrt{1-x^2}}$$



$$\frac{d}{dx}(\arctan x) = \frac{1}{1+x^2}$$

