Math 1080 Exam 1: Formula Sheet

The following formulas are provided as a reference.

$\cos^2 x + \sin^2 x = 1$	$1 + \tan^2 x = \sec^2 x$
$\sin^2 x = \dfrac{1 - \cos 2x}{2}$	$\cos^2 x = \dfrac{1 + \cos 2x}{2}$
$\sin 2x = 2 \sin x \cos x$	$\dfrac{d}{dx} \sin x = \cos x$
$\dfrac{d}{dx} \cos x = -\sin x$	$\dfrac{d}{dx} \sin^{-1} x = \dfrac{1}{\sqrt{1 - x^2}}$
$\dfrac{d}{dx} \tan^{-1} x = \dfrac{1}{1 + x^2}$	$\dfrac{d}{dx} \sec^{-1} x = \dfrac{1}{x\sqrt{x^2 - 1}}$
$\dfrac{d}{dx} \tan x = \sec^2 x$	$\dfrac{d}{dx} \sec x = \sec x \tan x$
Hooke's Law: $F(x) = kx$	Work = Force $\cdot$ Distance
Force = Mass $\cdot$ Acceleration	Mass = Density $\cdot$ Volume
Hydrostatic pressure $= \dfrac{\text{Force}}{\text{Area}} =$ Density $\cdot$ Gravity $\cdot$ Depth	