King **F**ahd **U**niversity for **P**etroleum and **M**inerals
Department of Mathematics & Statistics
Term 131 Math 101 (09) Quiz#8 (3.9 and 3.10)
Family Name: S.r#

Q1. Find y'

i. $y = \cos^{-1}(\ln x)$

ii. $y = \csc^{-1}(\tan x)$

Q2. Evaluate

i. $\lim_{x \to \infty} \cot^{-1}(-x)$

ii. $\lim_{x \to -\infty} \sec^{-1}(x)$

Q3. The edge of a cube decreases at a rate of *2cm/sec*. At what rate is the cube's surface area changing when the edge length is *3cm* ?

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Term 131 Math 101 (16) Quiz#8 (3.9 and 3.10)
Family Name: S.r#

Q1. Find y'

$i.\quad y = \csc^{-1}(\ln x)$

$ii.\quad y = \cot^{-1}(\sin x)$

Q2. Evaluate

$i.\ \lim_{x \to -\infty} \tan^{-1}(-x)$

$ii.\ \lim_{x \to \infty} \csc^{-1}(x)$

Q3. If $V = xyz$ .Find $\frac{dV}{dt}$ when $x = -1cm,\quad y = 2cm,\quad z = 3cm$.

if $\frac{dx}{dt} = 1^{cm}\!/_{\sec},\quad \frac{dy}{dt} = 4^{cm}\!/_{\sec},$ and $\frac{dz}{dt} = -2^{cm}\!/_{\sec}$