ACH2011 - Cálculo I

Sistema de Informação - EACH

Exercício: Calcular as derivadas das funções:

1. $f(x) = \text{sen}(x^2)$ $\quad f'(x) = \cos(x^2) \cdot 2x$

2. $g(x) = (\text{sen}(x))^2$ $\quad g'(x) = 2 \operatorname{sen} x \cdot \cos x$
$= \operatorname{sen}^2(x)$

3. $h(x) = \text{sen}\left(\cos\left(\text{tg}(x^2)\right)\right)$

$h'(x) = \cos\left(\cos(\text{tg}(x^2))\right) \cdot \left(-\operatorname{sen}(\text{tg}(x^2))\right)$
$\cdot \sec^2(x^2)\, 2x$
$= -2x \cos(\cos(\text{tg}(x^2))) \cdot \operatorname{sen}(\text{tg}(x^2)) \cdot \sec^2(x^2)$