Derivadas

1) Indicar la/las opciones correctas en cada caso

a) $f(x) = sen(4x^2)$

$f'(x) = \cos(8x)$

$f'(x) = \cos(4x^2) + 8x$

$f'(x) = \cos(4x^2) \,.\, 8x$

$f'(x) = \cos(32x^3)$

b) $f(x) = \frac{3}{x^2}$

$f'(x) = \frac{3}{2x}$

$f'(x) = \frac{0}{2x}$

$f'(x) = 6x^{-3}$

$f''(x) = \frac{3}{2}$

$f''(x) = \frac{18}{x^4}$

c) $f(x) = e^{5x}$

$f'(x) = e^{5x} \,.\, 5x$

$f'(x) = 5 \,.\, e^{5x}$

$f'(x) = e^5$

$f'(x) = 5x.e^5$

d) $f(x) = \sqrt[3]{2x}$

$f'(x) = \frac{2}{3\sqrt[3]{(2x)^2}}$

$f'(x) = \frac{1}{3}(2x)^{-\frac{2}{3}}$

$f'(x) = \sqrt[3]{2x} \,.\, 2$

$f'(x) = \frac{2}{3\sqrt[3]{4x^2}}$

e) $f(x) = Ln(sen\, x)$

$f''(x) = \frac{-sen\ x}{\cos x}$

$f'(x) = \frac{1}{x}.\cos x$

$f'(x) = \frac{\cos x}{sen\ x}$

$f''(x) = \frac{-sen^2 x - \cos^2 x}{sen^2 x}$

f) $f(x) = e^{x^3}$

$f''(x) = e^{x^3}.3x^2.6x$

$f''(x) = e^{x^3} 3x^2.3x^2 + 6x.e^{x^3}$

$f'(x) = e^{x^3}.3x^2$

$f''(x) = 9x^4.e^{x^3} + 6x.e^{x^3}$

$f'(x) = e^x.3x^2$