Derivadas

1) Indicar la/las opciones correctas en cada caso

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$f'(x) = e^5$

$f'(x) = 5x \cdot e^5$

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

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

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

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

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

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

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

$f'(x) = \dfrac{1}{x} \cdot \cos x$

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

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

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

$f''(x) = e^{x^3} \cdot 3x^2 \cdot 6x$

$f''(x) = e^{x^3} 3x^2 \cdot 3x^2 + 6x \cdot e^{x^3}$

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

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

$f'(x) = e^x \cdot 3x^2$