HOJA DE DERIVADAS

Deriva:

1 $y = \cos^2(x^2+1)$

2 $y = \ln(tg(1-x))$

3 $y = \dfrac{sen^2(2x+1)}{\cos(1-x)}$

4 $y = tg^3(5x)$

5 $y = sen\sqrt{\ln(1-3x)}$

6 $y = \sec(5x+2)$

7 $y = \dfrac{\cos 2x + sen2x}{\cos 2x - sen2x}$

8 $y = arcsen\dfrac{x+1}{x-1}$

9 $y = arctg\dfrac{x-1}{1-x}$

10 $y = \cos^2(arcsenx^2)$

11 $y = e^{x^2}$

12 $y = \sqrt[3]{ctgx}$

13 $y = \arccos(x^2)$

14 $y = sen^3(\cos\dfrac{1}{x})$

15 $y = \ln\sqrt{\dfrac{1+sen2x}{1-sen2x}}$

16 $y = arctg\dfrac{x+1}{1-x}$

17 $y = \dfrac{\sqrt{tgx}}{a^{\sqrt{x}}}$

18 $y = \ln\dfrac{1+tg(\frac{x}{2})}{1-tg(\frac{x}{2})}$

19 $y = \sqrt[x]{senx}$

20 $y = x^{\sec x}$

21 $y = (arcsenx)^{senx}$

22 $y = 2^{sen\sqrt{x}}$

23 $y = \log_{10}(1+2x)$

24 $y = \dfrac{\cos x}{2sen^2 x} - \dfrac{1}{2}\ln tg\dfrac{x}{2}$

25 $y = \ln\dfrac{\sqrt{1+x^4}+x\sqrt{2}}{1-x^2} - arcsen\dfrac{x\sqrt{2}}{1+x^2}$

26 $y = \dfrac{x}{a+\sqrt{a^2-x^2}}$

Halla la 1ª y 2ª derivadas de:

27 $y = \dfrac{(3-x)(2x-1)}{1+x^2}$

28 $y = \dfrac{7x-1}{(2x+3)^4}$

Calcula la derivada de la función dada en cada caso, simplificando razonablemente:

a. $f(x) = (arcsenx)^{\sqrt{x}}$

b. $f(x) = \dfrac{tgx}{xsenx}$

c. $f(x) = sen(tg\sqrt{x})$

d. $f(x) = \sqrt{\dfrac{x+1}{x-1}}$

e. $f(x) = \cos^3(x^2+4)$

f. $f(x) = 3^{x^2} + 5$

g. $f(x) = \sec x$

h. $f(x) = \ln(tg(x+e^x))$

i. $f(x) = tg(tgx) + tg^2 x$

j. $f(x) = \sqrt{sen(x^2)}$

k. $f(x) = arctg\sqrt{x^2-1}$

l. $f(x) = \ln(\arccos(-x))$

m. $f(x) = \dfrac{\log_{10} x}{x}$

n. $f(x) = tg(e^{2x-1})$

ñ. $f(x) = \dfrac{1}{x} + \sec^3(-3x^2+4)$

o. $f(x) = x + \cos^2 x^3$

p. $f(x) = (2x+1)^2\sqrt{3x-2}$

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

r. $f(x) = \dfrac{2x-1}{\sqrt[3]{3x^2}}$

s. $f(x) = \sqrt{\dfrac{2x-1}{x^3-1}}$

t. $f(x) = (x-senx)^{\sqrt{x}}$

u. $f(x) = \dfrac{arctg\sqrt{x}}{\sqrt{x}}$

v. $f(x) = \ln 5 + 5^x + x^5 + x^x + 5^5$

w. $f(x) = \ln\sqrt{\dfrac{x^3\cos x}{senx}}$