TAREA 4 – 5

Derivar las siguientes funciones usando las fórmulas 20 a 26 del formulario proporcionado.

PROBLEMA

1. $y = \arctan ax^2$
2. $y = \arcsin\left(3x - 4x^3\right)$
3. $y = \operatorname{arcsec}\dfrac{x^2+1}{x^2-1}$
4. $y = \arccos\dfrac{x}{a}$
5. $y = \operatorname{arcsec}\dfrac{x}{a}$
6. $y = \operatorname{arccot}\dfrac{x}{a}$
7. $y = \operatorname{arcsec}\dfrac{1}{x}$
8. $y = \operatorname{arccsc} 2x$
9. $y = \arcsin\sqrt{x}$
10. $\theta = \operatorname{arcvers}\rho^2$
11. $y = x\arcsin 2x$
12. $y = x^2 \arccos x$
13. $f(u) = u\sqrt{a^2-u^2} + a^2 \arcsin\dfrac{u}{a}$
14. $f(x) = \sqrt{a^2-x^2} + a\arcsin\dfrac{x}{a}$
15. $v = a^2 \arcsin\dfrac{u}{a} - u\sqrt{a^2-u^2}$
16. $v = \dfrac{u}{\sqrt{a^2-u^2}} - \arcsin\dfrac{u}{a}$
17. $v = \arcsin\dfrac{u}{a} + \dfrac{\sqrt{a^2-u^2}}{u}$
18. $v = a\arccos\left(1-\dfrac{u}{a}\right) + \sqrt{2au-u^2}$
19. $\phi = \arctan\dfrac{a+r}{1-ar}$
20. $x = r\operatorname{arcvers}\dfrac{y}{r} - \sqrt{2ry-y^2}$
21. $y = \dfrac{1}{3}x^3 \arctan x + \dfrac{1}{6}\ln\left(x^2+1\right) - \dfrac{1}{6}x^2$