

Set 013 Exercises: Derivatives with logs and inverse trig functions

Find $\frac{dy}{dx}$

[1] $y = \ln x^4$

[2] $v(t) = t \ln t$

[3] $r = \frac{\ln \theta}{\theta}$

[4] $a(t) = t^2 \sin^{-1} t$

[5] $y = \cos^{-1}(2x)$

[6] $f(s) = \frac{\tan^{-1} s}{s^2}$

[7] $a(t) = \sin(\ln t)$

[8] $f(x) = (\ln x)^3$

[9] $f(x) = x \cdot 2^x$

[10] $f(x) = 5^{\cos x}$

[11] $f(y) = \ln(\csc y - \cot y)$

[12] $y = \ln(\cos t)$

[13] $f(x) = \tan^{-1}(\ln x)$

[14] $f(y) = \frac{1}{\ln y}$