

Logarithmic Differentiation

Directions: Find $\frac{dy}{dx}$ for each equation.

1. $y = x^{\sin x}$

2. $y = (\cos x)^{\cos x}$

3. $y = (\ln x)^x$

4. $y = (\tan x)^{(e^x)}$

5. $y = x^{(\sin^{-1} x)}$