Advanced Higher Maths
Maths.scot

A curve is defined by $y = x^{\cot x}$.

Use logarithmic differentiation to find $\dfrac{dy}{dx}$.

Write your answer in terms of x. **5**

Answer:

$$\frac{dy}{dx} = x^{\cot x}\left(-\cos ec^2\, x \ln x + \frac{\cot x}{x}\right)$$