Differentiation & Applications (Q 6 & 7, Paper 1)

Lesson No. 4: Logarithmic Differentiation

2006

7 (c) Given $y = \ln\left(\frac{3+x}{\sqrt{9-x^2}}\right)$, find $\frac{dy}{dx}$ and express it in the form $\frac{a}{b-x^n}$.

2003

7 (c) (i)Given that $y = \ln\frac{1+x^2}{1-x^2}$ for $0 < x < 1$, find $\frac{dy}{dx}$ and write your answer in the form

$\frac{kx}{1-x^k}$ where $k \in \mathbf{N}$.

Answers

2006 7 (c) $\frac{3}{9-x^2}$

2003 7 (c) (i) $\frac{dy}{dx} = \frac{4x}{1-x^4}$