09	2a	Differentiate with respect to x: (ii) $(e^x + 1)^2$.	2

$\frac{d}{dx}[(e^x + 1)^2] = 2(e^x + 1)^1 . e^x$ by using the function of function (or chain) rule.

$= 2e^x(e^x + 1)$

State Mean: **1.81/2**

* These solutions have been provided by *projectmaths* and are not supplied or endorsed by the Board of Studies

Board of Studies: Notes from the Marking Centre

The chain rule was the most popular method used for differentiation with only a small number of candidates choosing to expand the original expression. Common incorrect responses included $f'(x) = 2(e^x + 1)$, $2(e^x + 1)^2 \times e^x$ and $(e^x + 1) \times e^x$. Those candidates who chose the expansion method quite often incorrectly expanded, obtaining $f(x) = e^{x^2} + 2e^x + 1$.

Source: **http://www.boardofstudies.nsw.edu.au/hsc_exams/**