05	2b	Differentiate with respect to x: (i) $x \sin x$	2

$f(x) = x \sin x$

Using product rule: $f'(x) = u'v + v'u$, where $u = x$ $v = \sin x$

$u' = 1$ $v' = \cos x$

$= 1.\ \sin x + \cos x.\ x$

$= \sin x + x \cos x$

* 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

Most responses demonstrated correct use of the product rule, but many included errors in simplifying.

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

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