09	2b	(ii) Find $\int \dfrac{3}{(x-6)^2}\, dx.$	2

$$\int \frac{3}{(x-6)^2}\, dx = \int 3(x-6)^{-2}\, dx$$

$$= \frac{3(x-6)^{-1}}{1.-1} + c$$

$$= \frac{-3}{x-6} + c$$

State Mean:
1.00/2

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

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Board of Studies: Notes from the Marking Centre

Candidates who showed setting out which included the first line of working — $\int 3(x-6)^{-2} dx$ — generally gave a final response that achieved full or part marks. The most popular incorrect response involved the use of logarithms in the primitive function, presumably because the function had a denominator. A few responses incorrectly attempted to find $\int (3x-18)^{-2} dx$, others used primitives involving inverse trigonometric functions, some differentiated and a few incorrectly expanded the denominator and followed this by an attempt to integrate term by term.

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