11	2e	Find $\int \frac{1}{3x^2}\, dx$.	2

State Mean: **0.91/2**

$$\int \frac{1}{3x^2}\, dx = \int \frac{1}{3} x^{-2}\, dx$$

$$= \frac{1}{-3} x^{-1} + c$$

$$= -\frac{1}{3x} + c$$

Board of Studies: Notes from the Marking Centre

Responses that brought the coefficient $\frac{1}{3}$ to the front of the integral were generally more successful. The most common error was to integrate $3x^{-2}$ instead of $\frac{1}{3}x^{-2}$.

Another common error was to interpret this as a logarithm integral. Also, the use of the integral sign was poor, being written after the integration had been performed or being left out completely.

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