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

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

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

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

State Mean: 0.91/2

## **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/

<sup>\*</sup> These solutions have been provided by projectmaths and are not supplied or endorsed by the Board of Studies