2014 11d Find $\int \frac{1}{(x+3)^2}\,dx$. **2**

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

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

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

State Mean: **1.41**

* These solutions have been provided by *projectmaths* and are not supplied or endorsed by BOSTES.

Board of Studies: Notes from the Marking Centre

Quite a few candidates found this part difficult. Some of those expressed $\frac{1}{(x+3)^2}$ as $(x + 3)^{-2}$ then integrated incorrectly.

Common problems were:

- dividing by a positive power rather than a negative
- differentiating instead of integrating
- obtaining a logarithmic function for the primitive.

http://www.boardofstudies.nsw.edu.au/hsc_exams/2014/pdf_doc/2014-maths.pdf