07	2b	Evaluate (ii) $\int\limits_{1}^{4} \dfrac{8}{x^2}\ dx$.	3

$$\int\limits_{1}^{4} \frac{8}{x^2}\ dx = \int\limits_{1}^{4} 8x^{-2}\ dx$$

$$= \left[\frac{8x^{-1}}{-1}\right]_{1}^{4}$$

$$= \left[-\frac{8}{x}\right]_{1}^{4} \text{on calculator}$$

$$= -\frac{8}{4} - -\frac{8}{1}$$

$$= -2 + 8$$

$$= 6$$

* 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
(ii) Many candidates could not correctly find the primitive of x^{-2}. The most common error was to use a log function in their primitive. Once a primitive was found, candidates were usually able to apply the limits in the correct order to their primitive. Candidates are reminded that it is essential to show the substitution of the limits and use appropriate brackets before evaluating.
Source: http://www.boardofstudies.nsw.edu.au/hsc_exams/