10	2d	(i) Find $\int \sqrt{5x+1}\ dx$.	2

State Mean: **1.28/2**

$$\int \sqrt{5x+1}\ dx = \int (5x+1)^{\frac{1}{2}}\ dx$$

$$= \frac{(5x+1)^{\frac{3}{2}}}{\frac{3}{2}.5} + c$$

$$= \frac{2(5x+1)^{\frac{3}{2}}}{15} + c$$

$$= \frac{2\sqrt{(5x+1)^3}}{15} + c$$

Board of Studies: Notes from the Marking Centre

Most candidates knew that $\sqrt{5x+1} = (5x+1)^{\frac{1}{2}}$. A significant number of candidates multiplied by 5 rather than dividing and some added 5 to the index, $\frac{3}{2}$ rather than multiplying. Some candidates used some form of differentiation instead of integration and many forgot to include the constant of integration in their final answer.

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