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**2016 11**  
**d**

Evaluate  $\int_0^1 (2x + 1)^3 dx$ .

**2**

$$\begin{aligned}\int_0^1 (2x + 1)^3 dx &= \left[ \frac{(2x + 1)^4}{4 \times 2} \right]_0^1 \\&= \left[ \frac{(2x + 1)^4}{8} \right]_0^1 \\&= \frac{1}{8} [(2(1) + 1)^4 - (2(0) + 1)^4] \\&= \frac{1}{8} [81 - 1] \\&= 10\end{aligned}$$

State Mean:  
**1.63**

\* These solutions have been provided by [projectmaths](#) and are not supplied or endorsed by BOSTES.

### BOSTES: Notes from the Marking Centre

This information is released by BOSTES in late Term 1 2017.