11	1f	Rationalise the denominator of $\frac{4}{\sqrt{5}-\sqrt{3}}$. Give your answer in the simplest form.	2

State Mean: **1.59/2**

$$\frac{4}{\sqrt{5}-\sqrt{3}} = \frac{4}{\sqrt{5}-\sqrt{3}} \times \frac{\sqrt{5}+\sqrt{3}}{\sqrt{5}+\sqrt{3}}$$
$$= \frac{4(\sqrt{5}+\sqrt{3})}{5-3}$$
$$= \frac{4(\sqrt{5}+\sqrt{3})}{2}$$
$$= 2(\sqrt{5}+\sqrt{3})$$

Board of Studies: Notes from the Marking Centre

In better responses, the working was carefully set out. In many responses, the square root signs were 'lost' during the working. The most common errors included not multiplying by the conjugate, eg multiplying by $\frac{\sqrt{5}-\sqrt{3}}{\sqrt{5}-\sqrt{3}}$ and incorrectly expanding the denominator to obtain either $5+3$ or $5-9$. Some did not give the simplest form of the answer, eg $\frac{4(\sqrt{5}+\sqrt{3})}{2}$ rather than $2(\sqrt{5}+\sqrt{3})$.

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