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10	1b	Find integers a and b such that $\frac{1}{\sqrt{5}-2} = a + b\sqrt{5}$.	2
$\begin{aligned}\frac{1}{\sqrt{5}-2} &= \frac{1}{\sqrt{5}-2} \times \frac{\sqrt{5}+2}{\sqrt{5}+2} \\ &= \frac{\sqrt{5}+2}{5-4} \\ &= \sqrt{5} + 2 \\ &= 2 + \sqrt{5}, \text{ which is in the form } a + b\sqrt{5}, \text{ where } a = 2 \text{ and } b = 1.\end{aligned}$			State Mean: 1.55/2

* 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

A high percentage of candidates attained full marks for this part. A small but significant number of candidates cross multiplied in the hope of obtaining values for a and b but few if any were successful.

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