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<b>08</b>	<b>6a</b>	Solve $2\sin^2 \frac{x}{3} = 1$ for $-\pi \leq x \leq \pi$ .	<b>3</b>
$2\sin^2 \frac{x}{3} = 1$ $\sin^2 \frac{x}{3} = \frac{1}{2}$ $\sin \frac{x}{3} = \pm \frac{1}{\sqrt{2}}$ $\frac{x}{3} = -\frac{\pi}{4}, \frac{\pi}{4}$ $x = -\frac{3\pi}{4}, \frac{3\pi}{4}$			

\* 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

Many candidates had problems with the algebraic solution. The domain caused a number of problems with many candidates failing to restrict their solutions or obtaining the negative value. A number of answers were given in degrees. Some used double angle formulae successfully, although this was not easier or quicker than the standard approach. Candidates who tried to graph the sine function rarely achieved any marks.

Source: [http://www.boardofstudies.nsw.edu.au/hsc\\_exams/](http://www.boardofstudies.nsw.edu.au/hsc_exams/)