

07	1f	Find the equation of the line that passes through the point $(-1, 3)$ and is perpendicular to $2x + y + 4 = 0$.	2
<p>As $2x + y + 4 = 0$, then $y = -2x - 4$ \therefore gradient is -2</p> <p>This means gradient of perpendicular is $\frac{1}{2}$.</p> <p>$y - y_1 = m(x - x_1)$ with point $(-1, 3)$ and gradient $\frac{1}{2}$</p> <p>$y - 3 = \frac{1}{2}(x - (-1))$</p> <p>$y - 3 = \frac{1}{2}(x + 1)$</p> <p>$2y - 6 = x + 1$</p> <p>$x - 2y + 7 = 0$</p>			

* 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

The most common error was not correctly determining the gradient of the line $2x + y + 4 = 0$. Some candidates did not apply the formula $m_1 m_2 = -1$. Simple errors were also made substituting the point $(-1, 3)$ into the gradient–intercept formula.

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