09	3a	An arithmetic series has 21 terms. The first term is 3 and the last term is 53.	2
		Find the sum of the series.	

$$a = 3; \; l = 53; \; n = 21; \; S_n = \frac{n}{2}(a + l)$$

State Mean:
1.69/2

$$S_n = \frac{n}{2}(a + l)$$

$$S_{21} = \frac{21}{2}(3 + 53)$$

$$= \frac{21}{2}(56)$$

$$= 588$$

∴ the sum is 588.

* 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 used the formula $S_n = \frac{n}{2}(a + l)$. However, a number of candidates still

preferred to use the formula $S_n = \frac{n}{2}\left[2a + (n - 1)d\right]$ having to find the common difference using

$T_n = a + (n - 1)d$. Candidates using this approach often arrived at an incorrect value of d, or else found d correctly and then incorrectly stated the formula. There was minimal confusion with the notation for T_n and S_n. A significant number of students did not quote either formula correctly.

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