

- 7 (a) In an arithmetic progression, the sum of the first n terms, denoted by S_n , is given by

$$S_n = n^2 + 8n.$$

Find the first term and the common difference.

[3]

- (b) In a geometric progression, the second term is 9 less than the first term. The sum of the second and third terms is 30. Given that all the terms of the progression are positive, find the first term.

[5]