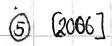
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	(AH Sequences + Senies Unit 2. Homework) Homework. (8).
NAR	Practice Questions
(1)	For the arithmenic sequence 10, 13, 16,
2	For the geometric sequence 972, 324, 108. Find  (a) the 7th term  (b) an expression for the sum of n terms.
Exc	m Practice Questions.
	Three consecutive tems in a geometric sequence are c c+4 and c+6, in that order. Determine the value of c and the value of the common ratio.
(L)	In a certain arithmetic sequence the sum of the first and Afth terms is 18 and the fifth term is 6 more than the third term. Show that the sum of the first ten terms is 165



The first three terms of a geometric sequence are

$$\frac{x(x+1)}{(x-2)}$$
,  $\frac{x(x+1)^2}{(x-2)^2}$  and  $\frac{x(x+1)^3}{(x-2)^3}$ , where  $x < 2$ .

- (a) Obtain expressions for the common ratio and the nth term of the sequence.
- (b) Find an expression for the sum of the first n terms of the sequence.

3

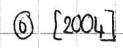
2

3

3

2

Obtain the range of values of x for which the sequence has a sum to infinity and find an expression for the sum to infinity.



- (a) Obtain the sum of the series  $8 + 11 + 14 + \ldots + 56$ .
- (b) A geometric sequence of positive terms has first term 2, and the sum of the first three terms is 266. Calculate the common ratio.
- (c) An arithmetic sequence, A, has first term a and common difference 2, and a geometric sequence, B, has first term a and common ratio 2. The first four terms of each sequence have the same sum. Obtain the value of a.
  - Obtain the smallest value of n such that the sum to n terms for sequence B is more than **twice** the sum to n terms for sequence A.