3A Arithmetic Sequences Introduction

1. An arithmetic sequence is generated as follows:

   6, 20, 34, 48, 72…

a) Find the nth term

b) Find the first term in the sequence that exceeds 200

2. An arithmetic sequence is generated as follows:
   101, 94, 87, 80, 73…
a) Find the nth term

b) Find the first term in the sequence that is negative

3. A sequence is generated by the formula $u_n = a + (n-1)d$, where a and b are constants to be found.

   Given that $u_3 = 5$ and $u_8 = 20$, find the values of the constants a and d.