

(C1-6.2a) Name:

## Homework Questions 2 – Using the Nth Term of A Sequences

1. Find the value of  $U_1, U_2, U_3$  and  $U_{20}$

a)  $U_n = 3n$

3, 6, 9

b)  $U_n = 7n - 2$

5, 12, 19

c)  $U_n = 2n^2$

2, 8, 18

d)  $U_n = n^2 - 4$

-3, 0, 5

2. A sequence is generate according to the formula  $U_n=an-b$ .

Given that  $U_3=7$  and  $U_5=13$ .find the value of a and b

a=3, b=2

3. Find the value of n for which  $U_n=(3n-2)^2$  has the given value of  $U_n=100$

n=4

4. A sequence is generated from the formula  $U_n=pn^2-q$  where p and q are constants. Given that  $U_1=-1$  and  $U_3=7$ , find the value of the constants p and q.

p=1 q=2

5. Find the value of n for which  $U_n$  has the given value

a)  $U_n=4n-1$  and  $U_n=23$

n=6

b)  $U_n = \frac{2n^3 - 1}{3}$  and  $U_n = 5$

n=2

c)  $U_n = 5n + 6$  and  $U_n = 31$

n=5