# Unit XXVI Assignment II

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# 1 Task I

The following are answers to questions set for the first task.

## 1.1 Question I

Find a formula for the NTH term of this sequence and find the 17TH term using your NTH term formula. Also calculate the **sum of the first 17 terms of this sequence**.

`Sequence: -3, 1, 5, 9, 13 ... Formula: 4n-3 as the diffence between all the numbers is 4 and the sequence starts at -3 1n..17n = -3, 1, 5, 9, 13, 17, 21, 25, 29, 33, 37, 41, 45, 49, 53, 57, 61`

## 1.2 Question II

Find a formula for the NTH term of this sequence and find the 10TH term using your NTH term formula. Also calculate the **sum to the 5th term** and the **sum to infinity** of this sequence.

`81, -27, 9, -3 ...  = Xn+/-Y Xn+/-Y 15n = n =`

## 1.3 Question III

Find the solution to

$$\sum_{r=1}^{6}(3r - 2r^2 + r^3)$$

Substituting the Rs for 1s.

$$\sum_{r=1}^{6}((3 \times 1) - (2 \times 1^2) + (1^3))$$

Working out the brackets.

$$\sum^{6}(3 - (2 \times 2) + 1)$$

Final solution within the brackets.

$$\sum^{6}(3 - 4 + 1)$$

Final solution without the brackets

$$\sum^{6}(2)$$

Therefore we need to divide the final number by 6 to get the SUM as we need to balance both sides of the equation.

$$\sum(\frac{2}{6})$$

Ergo:

$$0.\dot{3}$$

## 1.4 Question IV

## 1.5 Question V

## 1.6 Question VI