ACTIVITY 1.2

Sigma Notation for Summation

(1) Calculate the following sums.

(a)
$$\sum_{k=1}^{10}(3k+5)$$

(b)
$$\sum_{k=1}^{10}\frac{1}{2}(3k^2-k)$$

(c)
$$\sum_{m=1}^{10}\sum_{n=1}^{10}(3m+5n)$$

(d)
$$\sum_{m=1}^{10}\sum_{n=1}^{10}(3mn+5)$$

(2) Write down the sigma notation for the following sums.
   (a) $1 + 3 + 6 + 10 + 15 + \ldots + 171$
   (b) $9 + 36 + 81 + 144 + \ldots + 3249$

(3) Find the sum of the first n terms of the sequence,
$0^2 + 1^2, 1^2 + 2^2, 2^2 + 3^2, 3^2 + 4^2, \ldots$

Date: September 20, 2023.