Mathematics For Computing
Sigma Notation

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Sigma Notation

Let $s_n = 1 + 3 + 5 + \ldots + (2n-1)$ for $n \in \mathbb{Z}^+$.

(a) Express s_n using $\sum$ notation.

(b) Calculate s_1, s_2 and s_3.

(c) Find a recurrence relation which expresses s_{n+1} in terms of s_n.

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$$s_n = \sum_{i=1}^{n} (2i - 1).$$

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(b) $s_1 = 1,\ s_2 = 4,\ s_3 = 9,$

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$$\text{(c)} \quad s_{n+1} = s_n + (2n+1)$$

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