

$$\text{Average} = \text{Sum}(i/n) = 1/n \text{ Sum}(i) = 1/n * n(n+1)/2 = (n+1)/2$$

$$\text{Variance} = \text{Sum}((1/n) * \{i - (n+1)/2\}^2) = (n+1)(2n+1)/6 - \{(n+1)^2\}/4$$