

Vi har summationsformeln

$$\sum_{i=1}^n i = \frac{n(n+1)}{2}$$

och

$$\sum_{i=1}^n (i-1) = \frac{n(n-1+1-1)}{2}$$

Stegen som utelämnats i lösningarna blir då:

$$I_{min} = \sum_{i=1}^n (1+4(i-1)-2) \frac{4}{n} = \sum_{i=1}^n (-1) \frac{4}{n} + \sum_{i=1}^n \frac{4(i-1)}{n} \frac{4}{n} = -4 + \frac{4n(n-1)}{2n} \frac{4}{n} = -4 + 8 - \frac{8}{n} = 4 - \frac{8}{n}$$

$$I_{max} = \sum_{i=1}^n (1+4(i)-2) \frac{4}{n} = \sum_{i=1}^n (-1) \frac{4}{n} + \sum_{i=1}^n \frac{4(i)}{n} \frac{4}{n} = -4 + \frac{4n(n+1)}{2n} \frac{4}{n} = -4 + 8 + \frac{8}{n} = 4 + \frac{8}{n}$$