

**NOTASI SIGMA ( S )**

Notasi untuk sigma ( jumlah ) diberikan berikut :

$$\sum_{i=1}^n a_i = a_1 + a_2 + \dots + a_n \quad \text{dan} \quad \sum_{i=1}^n k = \underbrace{k + k + \dots + k}_{n \text{ suku}} = nk$$

Beberapa sifat dan rumus sigma diberikan berikut :

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| <p>1. <math>\sum_{i=1}^n (ka_i + lb_i) = k \sum_{i=1}^n a_i + l \sum_{i=1}^n b_i</math> (sifat linear)</p> <p>2. <math>\sum_{i=1}^n (a_{i+1} - a_i) = a_{n+1} - a_1</math></p> <p>3. <math>\sum_{i=1}^n [(i+1)^2 - i^2] = (n+1)^2 - 1</math></p> <p>4. <math>\sum_{i=1}^n i = \frac{n(n+1)}{2}</math></p> | <p>5. <math>\sum_{i=1}^n i^2 = \frac{n(n+1)(2n+1)}{6}</math></p> <p>6. <math>\sum_{i=1}^n i^3 = \left[ \frac{n(n+1)}{2} \right]^2</math></p> <p>7. <math>\sum_{i=1}^n i^4 = \frac{n(n+1)(6n^3 + 9n^2 + n - 1)}{30}</math></p> |
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**Soal Latihan**

(Nomor 1 sd 10) Hitung nilai sigma berikut :

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| <p>1. <math>\sum_{i=1}^6 2i^2</math></p> <p>2. <math>\sum_{i=1}^6 (i+1)^2</math></p> <p>3. <math>\sum_{i=2}^4 \frac{(-1)^i}{i(2i+1)}</math></p> | <p>4. <math>\sum_{i=1}^7 \cos i\pi</math></p> <p>5. <math>\sum_{k=1}^{40} \left( \frac{1}{k} - \frac{1}{k+1} \right)</math></p> <p>6. <math>\sum_{k=1}^{10} (2^k - 2^{k-1})</math></p> | <p>7. <math>\sum_{k=3}^{20} \left( \frac{1}{(k+1)^2} - \frac{1}{k^2} \right)</math></p> <p>8. <math>\sum_{i=1}^{10} [(i-1)(4i+3)]</math></p> <p>9. <math>\sum_{k=1}^{10} 5k^2(k+4)</math></p> |
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10.  $\sum_{i=1}^n (2i-3)^2$

( Nomor 11 sd 16 ) Nyatakan dalam notasi sigma deret berikut:

11.  $1 + 2 + 3 + \dots + 98$

12.  $2 + 4 + 6 + \dots + 100$

13.  $1 + \frac{1}{2} + \frac{1}{3} + \dots + \frac{1}{69}$

14.  $1 - \frac{1}{2} + \frac{1}{3} - \frac{1}{4} + \dots - \frac{1}{50}$

15.  $f(c_1) + f(c_2) + \dots + f(c_n)$

16.  $f(w_1)\Delta x + f(w_2)\Delta x + \dots + f(w_n)\Delta x$