

1) $a = \frac{w}{r}, \angle = s \rightarrow l = \frac{w}{r}(1) + b(1) + s \rightarrow br = \frac{1}{r}$

4) di: $\begin{pmatrix} 5 & 0 & 1 & 0 & 4 \\ + & + & + & + \\ + & + & + \end{pmatrix} \rightarrow a = \frac{1}{4}, c = 0 \rightarrow 0 = \frac{1}{4}(1)^4 + (1)b + 0 \rightarrow b = -\frac{1}{4} \rightarrow a_n = \frac{1}{4}n^4 - \frac{1}{4}n$
 $b = \frac{1}{4}n(n-1)$

$$110 = n(n-1) \rightarrow n = 11$$

$$e) a_n = \frac{(-1)^n}{n} \rightarrow (-1) \left(\frac{1}{1} \right), -\frac{1}{2}, \frac{1}{3}, \dots \rightarrow \frac{1}{n} - (-1) = \frac{n}{1}$$

4) $a_1 - a_2 = 1 \rightarrow a_1 + w_d - a_1 = 1 \rightarrow w_d = 1 - d = \varepsilon \rightarrow a_2 - a_1 = a_1 + b_d - a_1 = \alpha(\varepsilon) = p_0$

مصدر: $2, 9, 4, 10, 12 \rightarrow a_n = 2n - 2$
 محض: $5, 7, 9, 11 \rightarrow b_n = 2n + 3$

$c_n = \frac{2n-2}{2n+3} \rightarrow \frac{2n-2}{2n+3} < \frac{1}{2} \rightarrow 2n-2 < n+3$
 $2 \nmid 1 \frac{1}{2} \rightarrow n \nmid 4 \quad \square$

$$\begin{aligned} & \textcircled{0} \quad \underbrace{+4}_{-2} + \underbrace{+0}_{-2} + \underbrace{+0}_{-2} + \underbrace{+0}_{-2} \\ & \rightarrow a = -\frac{2}{L}, c = 0 \rightarrow a = -\frac{2}{L} \quad (1)' + b(1) + 0 = b = \frac{1}{L} \end{aligned}$$

$$a n = -\frac{2}{L} n + \frac{1}{L} n \rightarrow n \left(-\frac{2}{L} \right) + b \left(\frac{1}{L} \right) = 0$$

$$\begin{aligned} & \textcircled{-4} \quad \underbrace{+6}_{+2} + \underbrace{+2}_{+2} + \underbrace{+2}_{+2} \\ & \rightarrow a = 1, c = 0 \rightarrow -a = -1 \end{aligned}$$

$$-a = 1 \quad (1) + b(1) - 4$$

$$b = -1$$

$$a n = n^2 - n - 4$$

$$n^2 - n - 4 = 8n + 1$$

$$n(n-4) = 8n + 1 \rightarrow n = 9$$

$$a n = b n = 2(4) + 1 = 9$$

$$\begin{aligned} & a e = a r + r d = 2(1) \\ & a r = r 1 \\ & r d = 1 \rightarrow d = 2 \end{aligned}$$