


$a_n = 2^2 + n^2$ $a_n = (-1)^n (5n - 3)$ $a_n = 4 + (-4)^n$
 $a_n = n^2 + n^2 + 2n + 1$ $a_n = 7 + \frac{1}{3^n}$

Ej) $0_n = 5^n$
 $0_1 = 5_1 = 5$
 $0_2 = 5_2 = 25$
 $0_3 = 5_3 = 125$
 $0_4 = 5_4 = 625$
 $0_5 = 5_5 = 3,125$


Observa la figura. ¿Qué expresión determina la cantidad de azulejos en la figura n?

Figura 1




8

Figura 2



12

Figura 3



16

$C_n = 3^n - 1$ $C_n = 4n - 1$
 $(C_n) = \{1, 3, 9, \dots\}$ $(C_n) = \{8, 12, 16\}$

Ej) 35
 $\rightarrow 0_n = (-1)^n \times (2n) = 2, 4, 6, 8, 10$
 $0_1 = (-1)^1 \times (2 \times 1) = -2$
 $0_2 = (-1)^2 \times (2 \times 2) = 4$
 $0_3 = (-1)^3 \times (2 \times 3) = -6$
 $0_4 = (-1)^4 \times (2 \times 4) = 8$
 $0_5 = (-1)^5 \times (2 \times 5) = -10$

$\rightarrow C_n = 2^2 + n^3 = 5, 12, 31, 68, 129$
 $0_1 = 2^2 + 1^3 = 5$
 $0_2 = 2^2 + 2^3 = 12$
 $0_3 = 2^2 + 3^3 = 31$
 $0_4 = 2^2 + 4^3 = 68$
 $0_5 = 2^2 + 5^3 = 129$

$a_n = \frac{3n}{1+2n}$
 $0_1 = \frac{3 \times 1}{1+2 \times 1} = 1$ $0_2 = \frac{3 \times 2}{1+2 \times 2} = \frac{6}{5}$

$$a_3 = \frac{3 \times 3}{1+2 \times 3} \quad a_3 = \frac{9}{7} \quad a_4 = \frac{4 \times 4}{1+2 \times 4} \quad a_4 =$$

$$a_5 = \frac{5 \times 5}{1+2 \times 5} \quad a_5 = \frac{15}{11}$$

$$-) \quad a_n = -(-1)^n (5n-3)$$

$$a_1 = -(-1)^1 \times (5 \times 1 - 3)$$

$$a_4 = -(-1)^4 \times (5 \times 4 - 3)$$

$$a_1 = 2$$

$$a_4 = -17$$

$$a_2 = -(-1)^2 \times (5 \times 2 - 3)$$

$$a_5 = -(-1)^5 \times (5 \times 5 - 3)$$

$$a_2 = -7$$

$$a_5 = 22$$

$$a_3 = -(-1)^3 \times (5 \times 3 - 3)$$

$$a_3 = 12$$

$$-) \quad a_n = n^n + n^2 + 2n + 1$$

$$a_1 = 1^1 + 1^2 + 2 \times 1 + 1$$

$$a_4 = 4^4 + 4^2 + 2 \times 4 + 1$$

$$a_1 = 5$$

$$a_4 = 173$$

$$a_2 = 2^2 + 2^2 + 2 \times 2 + 1$$

$$a_5 = 5^5 + 5^2 + 2 \times 5 + 1$$

$$a_2 = 13$$

$$a_5 = 3161$$

$$a_3 = 3^3 + 3^2 + 2 \times 3 + 1$$

$$a_3 = 43$$

-)

$$a_n = 4 + (-4)^n$$

$$a_1 = 4 + (-4)^1$$

$$a_4 = 4 + (-4)^4$$

$$a_1 = 0$$

$$a_4 = 260$$

$$a_2 = 4 + (-4)^2$$

$$a_5 = 4 + (-4)^5$$

$$a_2 = 20$$

$$a_6 = -1020$$

$$a_3 = 4 + (-4)^3$$

$$a_3 = -60$$

-)

$$a_n = 7 + \frac{1}{3^n}$$

$$a_1 = 7 + \frac{1}{3^1}$$

$$a_4 = 7 + \frac{1}{3^4}$$

$$a_1 = \frac{22}{3}$$

$$a_4 = \frac{569}{81}$$

$$a_2 = 7 + \frac{1}{3^2}$$

$$a_5 = 7 + \frac{1}{3^5}$$

$$a_2 = \frac{64}{9}$$

$$a_6 = \frac{1702}{243}$$

$$a_3 = 7 + \frac{1}{3^3}$$

$$a_5 = \frac{190}{27}$$

Exp 46

$$\begin{array}{r} 0,95 \\ \underline{20} \\ 15 \end{array}$$

$$175 \div 100 = 0,15$$

$$\begin{array}{r} 0,15 \\ \underline{10} \\ 15 \end{array}$$

$$\begin{array}{r} 1,5 \\ \underline{0,75} \\ 2,25 \end{array}$$

La altura después de 40 años es 0,25 m

b)	6	1,055
	9,24	0,745
	2,99	0,526
	2,11	0,371
	1,492	0,262

$$y(x) = 2 - 2 + 6$$
$$-2 + 6$$
$$+ 4 = 4$$

$$\frac{b}{\sqrt{2}} = 7,24$$

o sea sucesivamente

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4)

-) 7, 14, 21, 28...

* $a_1 = 7, a_n = a_{n-1} + 7$

* $a_n = 7n$

-) 4, 5, 6, 7, 8

* $a_1 = 4, a_n = a_{n-1} + 1$

* $a_n = n + 3$

-) $\frac{2}{2}, \frac{4}{5}, \frac{6}{8}, \frac{8}{11}$ = No es una secuencia

-) 3, 6, 12, 24, 48, ...

* $a_1 = 3, a_n = 2a_{n-1}$

* $a_n = 3 \times 2^{n-1}$

-) 3, 8, 15, 24, 35, ... = No es una secuencia

-) $\frac{1}{2}, \frac{4}{5}, \frac{9}{8}, \frac{16}{11}$... = No es una secuencia

b) $b_1, b_2 = 0,25$ y $b_n = 4b_{n-1}$

a) $a_1 = 3$

$a_2 = 5$

$a_3 = 7$

$a_4 = 9$

c) $c_1 = 2$

$c_2 = 2$

$c_3 = 2$

$c_4 = 2$

b) $b_1 = 6 \times 23$

$b_2 = 6 \times 23 - 4 = 1$

$b_3 = 1 \cdot 4 = 4$

$b_4 = 4 \cdot 4 = 16$

$b_5 = 16 \cdot 4 = 64$

$b_6 = 64 \cdot 4 = 256$

d) $a_3 = 2 \cdot 1 + 0 = 2$

$a_4 = 2 \cdot 2 + 1 = 5$

$a_5 = 2 \cdot 5 + 2 = 12$