

Solución Módulo

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1)

$$a) a_n = 5n$$

$$a_1 = 5 \times 1 \\ = 5$$

$$a_2 = 5 \times 2 \\ = 10$$

$$a_3 = 5 \times 3 \\ = 15$$

$$a_4 = 5 \times 4 \\ = 20$$

$$a_5 = 5 \times 5 \\ = 25$$

$$b) a_n = (-1)^2 (2n)$$

$$a_1 = (-1)^2 (2 \times 1) \\ a_1 = 2$$

$$a_2 = (-1)^2 (2 \times 2) \\ a_2 = 4$$

$$a_3 = (-1)^2 (2 \times 3) \\ a_3 = 6$$

$$a_4 = (-1)^2 (2 \times 4) \\ a_4 = 8$$

$$a_5 = (-1)^2 (2 \times 5) \\ a_5 = 10$$

$$c) a_n = 2^2 + n^3$$

$$a_1 = 2^2 + 1^3$$

$$a_1 = 4 + 1$$

$$a_1 = 5$$

$$a_2 = 2^2 + 2^3$$

$$a_2 = 4 + 8$$

$$a_2 = 12$$

$$a_3 = 2^2 + 3^3$$

$$a_3 = 4 + 27$$

$$a_3 = 31$$

$$a_4 = 2^2 + 4^3$$

$$a_4 = 4 + 64$$

$$a_4 = 68$$

$$a_5 = 2^2 + 5^3$$

$$a_5 = 4 + 125$$

$$a_5 = 129$$

$$d) a_n = \frac{3n}{1+2n}$$

$$a_1 = \frac{3 \times 1}{1 + 2 \times 1} = \frac{3}{1+2} = \frac{3}{3} = 1$$

$$a_2 = \frac{3 \times 2}{1 + 2 \times 2} = \frac{6}{1+4} = \frac{6}{5}$$

$$a_3 = \frac{3 \times 3}{1 + 2 \times 3} = \frac{9}{1+6} = \frac{9}{7}$$

$$a_4 = \frac{3 \times 4}{1 + 2 \times 4} = \frac{3 \times 4}{1+8} = \frac{3 \times 4}{9} = \frac{4}{3}$$

$$a_5 = \frac{3 \times 5}{1 + 2 \times 5} = \frac{15}{1+10} = \frac{15}{11}$$

$$e) a_n = -(-1)^n (5n-3)$$

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

$$= -(-1) \cdot 2$$

$$= 1 \cdot 2$$

$$= 2$$

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

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

$$= -1(10 - 3)$$

$$= -1 \cdot 7$$

$$= -7$$

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

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

$$= -(-1) (15 - 3)$$

$$= 1 \cdot 12$$

$$= 12$$

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

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

$$= -1(20 - 3)$$

$$= -1 \cdot 17$$

$$= -17$$

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

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

$$= -1 (25 - 3)$$

$$= -1 \cdot 22$$

$$= -22$$

$$f) a_n = n^n + n^2 + 2n + 1$$

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

$$= 1 + 1 + 2 + 1$$

$$= 1 + 1 + 2 + 1$$

$$= 5$$

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

$$= 2^3 + 4 + 1$$

$$= 8 + 4 + 1$$

$$= 13$$

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

$$= 27 + 9 + 6 + 1$$

$$= 43$$

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

$$= 256 + 16 + 8 + 1$$

$$= 281$$

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

$$= 3125 + 25 + 10 + 1$$

$$= 3161$$

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

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

$$= 4 - 4$$

$$= 0$$

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

$$= 4 + 16$$

$$= 20$$

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

$$= 4 - 64$$

$$= -60$$

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

$$= 4 + 256$$

$$= 260$$

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

$$= 4 - 1024$$

$$= -1020$$

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

$$\begin{aligned} a_1 &= 7 + \frac{1}{3^1} \\ &= 7 + \frac{1}{3} \\ &= \frac{22}{3} \end{aligned}$$

$$\begin{aligned} a_2 &= 7 + \frac{1}{3^2} \\ &= 7 + \frac{1}{9} \\ &= \frac{64}{9} \end{aligned}$$

$$\begin{aligned} a_3 &= 7 + \frac{1}{3^3} \\ &= 7 + \frac{1}{27} \\ &= \frac{190}{27} \end{aligned}$$

$$\begin{aligned} a_4 &= 7 + \frac{1}{3^4} \\ &= 7 + \frac{1}{81} \\ &= \frac{568}{81} \end{aligned}$$

$$\begin{aligned} a_5 &= 7 + \frac{1}{3^5} \\ &= 7 + \frac{1}{243} \\ &= \frac{1702}{243} \end{aligned}$$

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$$A \quad 7, 14, 21, 28$$

$$R + A = A \cdot 2$$

$$B \quad 4, 5, 6, 7, 8$$

$$R + A = B + 1$$

$$C \quad \frac{2}{2}, \frac{4}{5}, \frac{6}{8}, \frac{8}{11}$$

$$R + A = C + 6$$

$$D \quad 3, 6, 12, 24, 48$$

$$\begin{aligned} R + A &= C + C = C + 1 \\ 3 + 3 &= 6 \end{aligned}$$

$$E \quad 3, 8, 15, 24, 35$$

$$R + A = C^2 - 1$$

$$F \quad \frac{1}{2}, \frac{4}{5}, \frac{9}{8}, \frac{16}{11}$$

$$R + A =$$